Textile World

Established 1868

With which are combined

TEXTILES and POSSELT'S TEXTILE JOURNAL

334 Fourth Ave., at 25th St. NEW YORK, OCTOBER 2, 1926 VOL. LXX, NO. 14

Handling Cost Elements in Textile Industry

Predetermination of Elements and Proper Classification of Them Are Two Essentials—Cost Analysis Must Be Made Currently—The Desk Executive Must Have Good Tools in Form of Proper Records—Basis for "Experience Costs"—Why Some Systems Fail—Methods Suggested for Direct Labor, Materials and Burden

*By Floyd H. Rowland**

MANY corporations of considerable size in the textile industry are to be found working along old fashioned lines of cost accounting, feverishly nourishing fallacies which are costing them substantial losses without their realizing the cause. In many instances, this is due to the fact that the average textile company has had a rather rapid growth during the last generation, so that the plant which started out as a small organization whose cost accounts could be carried around in the pocket of the owner, has now developed into a full fledged corporation. As the business grew, all kinds of cost records were added to meet additional needs, so that today we find that the cost records of the textile industry have grown like mushrooms, expanding to such a tremendous extent as to be unwieldy and incapable of interpretations in time for use.

Plants which were formerly profitable today find it extremely difficult to maintain the pace which modern competition has set. Analysis of costs which could formerly be made more or less at leisure, merely as an aid in determining selling price is a thing of the past. Today costs must be available currently and at all times. Inability to secure costs immediately may result in loss of business or, which is more serious, may cause acceptance of orders at a loss.

Broad View of Costs

In the installation of a cost system, the proper purpose of costs should be grasped at the start and clearly defined. Costs in the sense they are used here, mean not so much mere accounting with the view of estimating book facts, such as the selling price of the product and the cost of operation, but rather the setting up of a management function which will serve as a medium of control for the actual running of the plant. When viewed from this angle, the interpretation of a cost method carries with it the necessity for a broader comprehension as to the relation of cause and effect.

However, the average textile executive does not need to install a cost system. What he requires is a simplification of his cost systems. This is largely a matter of proper classifications of cost elements of the systems now in use, eliminating meaningless records, leaving only essential cost elements to be properly classified. We will term this process determination and classification of cost elements.

An important part of textile mill accounting is that devoted to costs. Floyd H. Rowland, in the third of a series of articles by him, casts light on the problem by indicating common flaws and suggesting principles by which costs may be reached rapidly and truthfully.

Since the textile executive can no longer be physically present in each of his departments or plants, he must have necessary data on his desk in time and in a form at once usable. Failure in either of these two phases means that the executive will not know of the condition until the damage has been done. The article herewith suggests means to provide the executive with the essential tools at the time when they may be serviceable.

The cost department should be placed on a footing with all other departments of the plant, justifying its existence by the results it produces. Today, however, this department in the textile industry is too often regarded as an unnecessary evil or as a hobby of one of the managers of the business.

Advantages from Proper Handling

The men who control industries of great magnitude other than the textile industry have been taught to interpret cost reports for far greater purposes than mere historical reviews. They find that they are able to reduce the cost of manufacturing by properly classifying all elements of cost and by providing for comparative reports of these classifications at periodic intervals. They find that a scientific system gives them a control of production that has heretofore been impossible because it demands the same classification of expenses in manufacturing as is required in the preparation of designs for weaving. It gives them a true picture of all the manufacturing activities with which they can not keep constantly in close contact.

The ramifications of textile manufacturing today are so numerous that the executive can no longer keep his finger on the pulse of his business by his physical presence in each of his plants and departments. The necessary data must come to his desk on time and in usable shape or he will never hear of it until the purse of his company is touched. Desk administration is a modern result of the growth of large enterprises. If it is to be successful, one of the first duties of every firm is to provide its executives with the tools needed in the form of proper records. In other articles in TEXTILE WORLD, we have discussed some of these records. This installment is concerned principally with costs. One particular example of the advantages to be derived will be cited. If the system has been in use a sufficient length of time to cover all phases of activities and problems, it permits the determination of a standard or averaged cost of manufacturing the different qualities, classes, etc., which the mill produces. With this standard as a guide, the mill managers and executives can tell the approximate cost of making an article. This gives them a quick method for obtaining a basis for selling prices, etc.

"Experience Costs"

These standards or "experience costs" are developed for each element of manufacturing cost in material, in labor, and in burden and are generally determined upon the volume of production that can be attained with the existing production facilities.

The "experience cost" gives the mill manager in addition a measuring rod of future operations because by comparing standard and actual costs and investigating the cause of the variations, this executive can keep the manufacturing activities directly under his control and reduce leaks to a minimum. This permits the anticipation of excess cost of manufacturing with the consquent possibility of eliminating unsatisfactory conditions. Summarizing we may say that the establishment of "experience costs" results in the following advantages:

1. **The introduction of a common denominator.** The figure showing the production of a certain amount of pounds or yards in a certain period or a comparison of such figures for different periods are valueless, if different products are manufactured in different periods. Comparison of "experience" time of this production with actual time on the other hand gives a valuable comparison because the "experience" time supplies a common denominator. An "experience" standard will immediately show if increases in expenses are justified by a similar increase in production.

2. **Provision for an efficiency control.** Comparison of the "experience" time and cost with the actual figures clearly show the efficiency of each employe, of each department and of each plant. Excessive waste will be disclosed, providing the data necessary for investigation. The manager is thus constantly supplied with information demanding executive action.

3. **Provision for control of the Planning Department.** This can be obtained by showing the cost of amount of idle time automatically on the statements. The cost of using the wrong equipment is disclosed as the comparisons will indicate the substitution. The same is true of any changes in design formulas such as substitution of materials, etc.

4. **Permit determinations of reason for variations in costs.** Variations between "experience" and actual cost indicate the trend in manufacturing costs and permit the determination of the reason. It is important that executives know these trends and anticipate these conditions.

5. **A basis is supplied for executive decision.** They furnish the necessary information for decisions as to intended reductions; they will

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show to what extent such reductions are advisable under certain conditions and which selling prices can be maintained. The advisability of reducing output or of discontinuing certain lines can be proven. Executive meetings with production managers become more interesting and more important through the introduction of facts determined in cost statements instead of guesses and personal opinions. Judgment can be based on "experience" facts. In addition, a superintendent has a better method available for dealing with employes.

6. Enables the establishment of production budgets. A means is at hand by the intelligent use of "experience" costs for the establishment of production budgets.

7. By making provision for the receipt of monthly cost statements a short time after the end of the month, the management can be supplied with reliable facts and information for their guidance.

Since the use of these standards is so valuable to the executive, it is easy to see why it is important that the cost system that is used to determine these figures should be one that is not only efficient but that is up-to-date and in keeping with modern practices. Its methods of classification and the processes for determination of cost elements must be on the soundest possible basis. Should the basis of the information be inaccurate or misleading, the conclusions reached therefrom must also be misleading.

Why Many Systems Are Failures

A natural question that may arise at this time is: Why do so many cost systems fail to give the results expected of them? Giving a general answer to such a question is very difficult. But a number of particular reasons applying to particular textile concerns may be cited as follows:

1. False economy in installation. While it was admitted that a cost system was desirable, an attempt was made to economize in the installation of the system with the result that necessary parts of the system were omitted, and thus the system could never function in the proper manner.

2. The method of procedure was wrong. It is an uneconomic procedure to attempt to install a cost system in any industry, and particularly in the textile industry, without making a thorough study of the requirements and then gradually installing a system paralleling it with whatever system is in use, until such time as it appears that all the facts are being secured in the manner desired. The more time spent in the installation of a cost system, the less time will be needed to operate it efficiently after the installation. This is true of most everything in the business world today. Science has determined that the longer the period of infancy the greater the adult development; or as one man popularly expressed it, "With more time at my disposal I would have been able to write you a shorter letter."

3. Cost elements not properly determined. Careful consideration was not given to each cost element. The importance of each element in the manufacturing process and the possibility of determining its accurate compilation under actual operating conditions must be determined. A close control of material is required for such materials as silk, but even in this case the control must be kept within practical limits. We must not spend too much time trying to reduce discrepancies to an insignificant fraction of a per cent when we know that variation in size, variation in quality of material, its hygroscopic nature, etc., will introduce a much larger variation. The same may be said concerning waste. Refinements must be limited to a degree justified by the result and simplicity should be the goal of the cost accountants. We cannot emphasize this need for simplicity too much.

Proper Classification Required

Of course, the only practical way to operate a cost department and the only safe way, is to demand that its operations balance with the financial records or books of account of the concern.

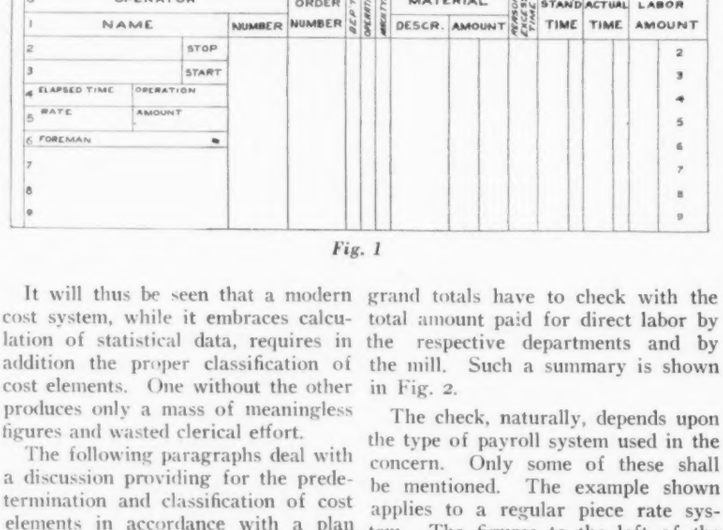


Fig. 1

It will thus be seen that a modern cost system, while it embraces calculation of statistical data, requires in addition the proper classification of cost elements. One without the other produces only a mass of meaningless figures and wasted clerical effort.

The following paragraphs deal with a discussion providing for the predetermination and classification of cost elements in accordance with a plan in actual operation and found practical. In an article of this type in which space is not available for detailed description, it is possible to point out only the fundamentals involved, and so we shall merely discuss the principal features of costing involved in labor, material and manufacturing burden.

Direct Labor

A previous article of this series has discussed this question to quite some extent. In the article on "Scheduling and Dispatching," which appeared in TEXTILE WORLD, issue of Aug. 7, 1926, the creation and distribution of tabulating cards for direct labor from a central point was explained. It was shown how these cards are used for the dispatching of production orders, how these cards are afterward collected in the payroll department and the payroll automatically printed on the printing tabulator. A description was given of the use of these cards or duplicates of these cards to adjust the production schedules and records.

The cost department has three functions in this connection: (1) It has to check the payments made by the mills; (2) Collect the amounts to be posted to Work in Process-Labor Account; (3) Furnish the figures for calculations and comparisons with standards.

The checking of payments made by the mills shall be first explained. The direct labor cards, illustrated as Fig. 1 in the previous article for the payroll department shall be taken as an example. These cards are filed by mill, by operating department upon receipt in the cost department. They are extracted from the file at the end of the payroll period and mechanically sorted to the guiding production information. This information will consist of material classifications in winding and quilling, and of qualities or articles for all other operations. A summary is obtained by mechanical tabulation of these cards showing totals for each classification and grand totals per department. These grand totals have to check with the total amount paid for direct labor by the respective departments and by the mill. Such a summary is shown in Fig. 2.

The check, naturally, depends upon the type of payroll system used in the concern. Only some of these shall be mentioned. The example shown applies to a regular piece rate system. The figures to the left of the double line are obtained on the printing tabulator. The checker enters the piece rate against each material classification, article or quality and then extends this rate by the yardage (pounds, ends, etc.) shown on the report. The amount obtained should be equal to the payroll amount shown on the left hand side of the double line. Discrepancies can be checked by automatic detail tabulation of the cards for the respective material, quality of article.

A similar check can be obtained under a pay system of hourly rates. The rates are entered on the right hand side of the double line and extended at actual time shown on the report. For the standard hour plan method of payment, the standard hourly rate is entered and extended by standard time for the classification.

We have disregarded so far the application of special rates which may be paid for operations on bad material, etc. These amounts will be taken care of by cards similar in design to the one shown in Fig. 1, but of different color. A code number is punched into this card, to allow mechanical separation of these special rates from all other labor cards in the sorter. The reason for allowing special rates is given by a code number in the column "Reason for excess time," while the rate is punched into the column headed "Standard time." These cards are tabulated in detail by mill, by department, by article, quality or material. This tabulation provides an excellent record for managerial purposes as it shows the order number, material, article or quality, the reason for special rates and these rates as well as the amounts paid. The excess cost of cheap material, of badly thrown or dyed material can thus be checked. Fig. 3 illustrates such a record for a winding department.

Shows Efficiency of Worker

Standard or "experience" cost systems are based on the assumption that it is more important to know the efficiency of each worker, of each department and the whole mill than to ascertain the actual cost of a specific production order or production unit. Where efficiency falls below standard, costs have to be broken down to the actual work done. The description of the direct labor control mentioned above shows clearly, how such a check may be accomplished. In some specific cases it may be necessary to obtain the cost of a specific production order. This information can be obtained by sorting the corresponding cards to production order after which the production cost can be accumulated.

The cost department must, as mentioned before, obtain the necessary figures for the "Work in Process-Labor" account. These figures standard and actual cost, in addition to quantities, are posted directly from the records shown in Figures 2 and 3.

The checking of the standards is a very important function under standard cost systems. Standards for the different operations are set for each article, quality or material classification. A check can be obtained by summarization of the direct labor records illustrated, or by sorting the labor tabulating cards periodically to these classifications. The summary will give quantities, time used, standard and actual cost, which can be compared with the standards.

In some cases it becomes necessary to compensate workers for idle time due to breakdowns or lack of orders for a short period. A special code number is assigned for idle time (0000 in the example on Fig. 3) and the reason coded in the same manner as the reasons for special rates. Amounts paid for idle time are summarized by reasons and tabulated on the same report as special rates.

In the method described previously it was assumed that the compilation of costs could be obtained at the central office. The accuracy of this assumption depends upon individual conditions. The method can easily be changed, without involving a change of the principles, for decen-

tralized record keeping. The work in the central cost office is then reduced to a minimum. The periodical reports may, in some cases, be much more quickly obtained than under the method described above. Tabulating equipment is then installed in the different mills, from which individual reports are sent to headquarters for check in total and summarization. Summarizations may be obtained from these reports or directly from a duplicate of the tabulating cards used in the mills.

It seems unnecessary to describe this adaptation in detail, as it should be easily understood from preceding descriptions.

Where the production units are relatively small, tabulating equipment may not prove economical. The records presented above are then compiled by hand. Each individual case must naturally be studied before determining the method to be used.

Material

It was mentioned under scheduling that the question whether tabulating cards should be made out for material requisitions depended upon the frequency of material issues and the quantities issued at one time. Material records have to be kept constantly up-to-date. This cannot be done if the material cards are allowed to accumulate over a longer period. The labor cards may be used in some instances to advantage to compile material summaries.

One copy of the material requisition, whatever their form may be, is retained at the local mill for posting to material record. The duplicate is sent to the headquarters for posting, or the postings are taken from the labor tabulating cards. The records at headquarters are preferably kept on a visible card record system to provide elasticity in handling. The forms for these records are well known and need no further description. The provision made in the cost records which are described hereafter, provide for the maintenance of detail material records in quantities only, this method resulting in a greater simplification of these records over methods in general use today. The detail records show material classifications and location of such materials by mill and by department.

We have now to provide a simple cost system for the control of materials. Subdivisions and, therefore, transfers should be reduced to a minimum. We believe that the method described below is as simple as it can be obtained without losing control over the expensive materials used in this industry.

The simplification mentioned previously is obtained by having only two groups of accounts up to and including work in process. The accounts in the general ledger on which entries for material are made are:

1. Materials.
2. Work in Process-Material.
3. Unfinished Stock.

The accounts for finished stock cannot really be called material records, as the transfers from unfinished stock are effected by classifications of finished product which, naturally include materials.

Preliminary Stages of Material

The account "Materials" includes all material in raw, in throwing, and thrown, in skein dyeing and dyed, in winding and wound, in quilling and quilled. No transfers are made on the cost records during this preliminary stage, detail information being obtained from the stores records. The subdivisions of this ledger account are the material classifications from a cost accounting point of view, i. e. technically necessary material classes which differ little in price and in price fluctuation can be combined into one subaccount. This again simplifies the procedure.

Winding and quilling were included in this account because they constitute preliminary operations, the same as throwing. There is, furthermore, a natural division between winding and warping or quilling and weaving, winding is partly done for specific production orders or qualities and partly against general requirements, irrespective of orders or qualities. The same can be said about quilling. As soon as warping is started, all material can be assigned to a specific order or quality or class. It is, therefore, possible to follow production from this point on, by orders or by qualities.

These accounts are debited from the vendor's invoice with quantities and cost. Handling charges and storage expense may be debited to these accounts. They are credited with material transferred to "Work in Process-Material" accounts in quantities and cost, with changes in material weights due to processing. These changes in weight are credited to these accounts as they occur in the preliminary processes.

"Work in Process-Material" accounts include material in operating departments as warping, twisting, weaving and picking. The location of materials as to mills and departments can be taken from the supporting stores records.

These accounts can be subdivided either by material classifications in the same manner as described for "Material" accounts, or by classifications of the final product as qualities, classes, articles. The question as to which one of the two methods is preferable depends upon the number of classifications of each kind. It will generally be found that there are less classifications of the finished product than material classifications. This leads to the subdivision of the "Work in Process-Material" accounts by qualities, classes or articles. This subdivision will at the same time simplify the check of material standards and transfers from these accounts to the "Unfinished Stock" accounts.

DIRECT LABOR COST SUMMARY — FIG. NO. 2

MILL: Atlanta DEPARTMENT: Weaving

ARTICLE OR QUALITY	QUANTITY YDS.	STANDARD TIME	ACTUAL TIME	PAY ROLL AMOUNT	PAY ROLL CHECK STD RATE	PAY ROLL CHECK EXTENSION	PAY ROLL CHECK DISCREPANCY	REMARKS
265	312	156.0	182.5	78.00	.25	78.00		
267	489	293.4	322.4	146.70	.30	145.70		
282	428	212.0	232.3	106.00	.25	107.00	−1.00	
	4275	2166.2	2412.6	1083.10		1082.10	1.00	

Fig. 2

"Unfinished Stock"

The "Work in Process-Material" accounts are debited with materials in quantities and cost as they are transferred from winding and quilling to warping and weaving. They are debited with waste occurring in the operations included. These accounts are credited with material quantities that are transferred in quantities and at cost to the "Unfinished Stock" accounts, and with quantities of waste incurred in warping, twisting, weaving, etc.

The accounts "Unfinished Stock" include material, labor, and overhead for goods woven as they are transferred out of the work in process accounts and up to the time they are transferred to "Finished Stock" after converting.

The subdivisions of this account are by classifications of the finished product, i. e. qualities, classes, articles. These accounts are debited with quantities and cost of material, with labor and burden from the work in process accounts and with the cost of converting of these goods. They are credited with quantities and cost of pieces transferred to "Finished Stock" account and in quantities with shrinkage due to converting.

DIRECT LABOR COST SUMMARY: SPECIAL RATES. — FORM NO. 3

MILL: Atlanta DEPARTMENT: Winding

ORDER NUMBER	MATERIAL DESCRIPTION	MATERIAL QUANTITY-LBS.	REASON FOR SPECIAL RATE	SPECIAL RATE	SPECIAL AMOUNT	REMARKS
2568	XX277	7.2	5	05.0	.36	
2570	XX222	15.0	9	07.0	1.05	
2610	X172	22.5	5	06.0	1.35	CODE - COLUMN 4
2612	I 62	54.2	6	08.0	5.14	5. MATERIAL FUZZY
						6. MATERIAL LOOPY
					23.72	9. " DOUBLE ENDS
0000			10		15.75	10. NO ORDERS
0000			14		29.00	14. NO MATERIAL
					44.75	

Fig. 3

The "Finished Stock" account does not require any special explanations.

The waste in the different operations may be charged directly to the material accounts or special waste accounts may be created. The choice of the method depends largely upon local conditions.

The method just explained will result in a reduction of work in the cost department to a minimum without reducing the control of quantities and expenses.

Burden

Any discussion on the subject of burden in cost accounting must be confined to the principles involved and not to a detailed routine procedure. And yet it is surprising to ascertain the number of variations in principles in existence not only in the textile industry but in every branch of manufacturing. An example of this may be cited. The cost committee of the Silk Association of America requested its members to calculate some specific weaves according to the methods used in their concerns. The raw material prices were given so as to eliminate differences that might arise from that source. A tabulation of the results brought out how different methods of distributing burden can decidedly affect cost prices. One concern for example had an unusually low cost for one construction and an unusually high cost for another construction. The variations between one concern and another were extremely large and warranted serious study. An analysis revealed the fact that the principal cause of difference was the method of charging overhead or burden. Some concerns distribute all overhead by labor dollar basis; others on a machine hour basis; still other concerns carry all overhead into the weaving department and distribute on a labor dollar basis in this department. It is not difficult to visualize the great variations in cost prices at any given point under such methods of burden distribution.

Concerns that have these peculiarities in burden distribution usually make mistakes in estimating cost or selling prices because it is not always kept in mind that the cost up to a certain point does not include certain expenses. In the rush of business, an executive may often secure what are supposedly cost figures, but which are cost less burden which has not been distributed at the point from which the figures have been secured. This very often works an injustice to the concern as they unconsciously undersell due to false impressions based on false figures.

Departmentizing the Mill

After all the principle that should be followed in the distribution of burden is to charge the incidental, indirect expenses involved in manufacturing in such a way as to be in a position to know the true cost of the manufacturing process at the

completion of the particular process. This principle must be intelligently interpreted, of course, and applied in a practical way. The first requirement in the introduction of this plan is the establishment of a departmental division of processing so that each department represents a particular activity that is of some importance from a cost of manufacturing standpoint. Within each department a segregation is made between the direct expense and the indirect but the indirect should be distributed over the particular department's operations. The general organization overhead must be distributed among these various production departments on an equitable basis which must be individually determined for each concern.

When these things are done and after a sufficient time has elapsed to give operating figures covering the general range of manufacturing, it will be possible to determine a standard rate of burden for each department. This permits more rapid handling of the cost accounting activities and expedites the preparation of figures for executives' use. Periodically of course the "experience" burden rate must be adjusted after comparison with the actual burden cost.

Standard Burden Rate

The advantages of establishing a standard burden rate may be enumerated as follows:

1. Eliminates constant fluctuations which do not correspond to actual conditions. This advantage is principally noticeable in time of very low or very high percentage of operation.

2. Inventory values will not be excessively increased during low periods. This factor is very important in its influence on the sales division in time of depression.

3. Variations between standard and actual burden give the management a basis for production and selling policies and also a means of effecting economies in burden expenses.

4. Cost statements and reports can be more quickly and more economically compiled.

5. Estimates on new constructions can be more quickly made.

After the general principles of burden distribution have been laid out, the next problem is the particular method of handling the distribution of burden expense within a department. Many different methods are in use such as a direct labor dollar, the direct labor hour, the machine hour method, the production center method, etc. It is not considered advisable to attempt to apply any particular method to all departments. The most equitable method should be applied to the departments to which it seems best fitted. It is known that in the main production departments in the textile industry, such as winding, warping, quilling, weaving, the machine hour method furnishes a fair basis of distribution. An example may show why this method appeals to us. Assuming that a winder can take care of a certain number of spindles on material A or twice this amount on material B. This example corresponds to actual conditions and it is often possible to run the spindles on material B at greater speed. In the example let us further assume that the spindles are running at the same rate of speed and that, therefore, the quantity produced on material A is one-half of the quantity produced on material B at the same time if both materials are of the same size. If the burden is distributed on a labor dollar or labor hour basis, material B will carry only half the burden per unit charged on A. This condition of course does not agree with actual effects. Material B requires in the same time (a) more space (b) a larger part of the machinery (c) more bobbin boys, and should therefore carry a heavier burden charge. By distributing the burden on a machine hour rate which collects all of the burden incident to the operation of a machine and distributes it against the product based on the number of hours a product required the use of the machine, a more equitable charge is obtained.

In a weaving department the labor-dollar or the labor-hour method would not lead to an equitable distribution of overhead with different types of looms requiring a different amount of attention by fixers. It might be pointed out of course that the same object could be obtained by subdividing the department according to type of looms. While this contention is true it is not practical and it would involve more work in order to secure a distribution of the burden to the different sections.

One point that must be kept in mind in any method of burden distribution is the accounting for idle time. Idle time should be brought to the attention of the executives very forciby in every cost report. We believe that the work involved in determining the separate figure showing actual cost of idle time included in the cost figures is justified. If on each and every cost report the executive is confronted with the fact that if it were not for idle time a certain percentage of the cost of manufacturing could be eliminated he would be continuously striving to lower this differential.

Example of Variations

An example giving the reasons and amounts of variations from standard cost is given below.

The winding department was chosen and the following assumptions made:

Standard spindle hours per month	200,000
Standard burden rate per spindle hour	0.00289
Idle time as obtained from idle time report in spindle hours	40,000
Standard production time as shown by production report (qualities extended by standard time)	140,000
Actual expense	$585.00

These figures allow the following deductions.

Standard burden for month is 200,000x0.00289	= $578.00
Burden absorbed by product is 140,000x0.00289	= $404.60
Burden for hours actually worked (200,000–40,000) x 0.00289	= $462.40

The result of this analysis shows

		Variations
Excess cost due to idle time	$578.00 – $462.40	$115.60
Excess cost due to inefficiency	$462.40 – $404.60	57.80
(Burden for hours actually worked minus burden absorbed by production)		
Excess due to increased pay	$585.00 – 578.00	$7.00
Total excess burden		$180.40

This amount represents the difference between the actual expenses ($585.00) and the expenses absorbed by the production ($404.60).

These variations will immediately show the weak points and indicate where inquiries have to be made. The investigation is, therefore, limited to the exceptions.

While, as we pointed out in the introduction to this article, we had necessarily, to confine ourselves to generalities, we believe that there have been presented in this cost summary, fundamental principles that are typical of modern scientific cost practices and that the intelligent application of these principles will result not only in securing cost figures but in showing the executives who get the cost reports, why they should seek a standard method of classifying costs and to interpret these standard classifications in a manner that will permit them to control productions operations.

Type Needed for Institute Head

Analysis of Job Requirements Used as Basis for Personnel Specifications

By Louis Bader

WITH the formation of The Cotton-Textile Institute the cotton industry has taken the first step in finding the way out of its difficulties. This is a splendid beginning and if the remaining necessary steps are taken in the same spirit of determination and singleness of purpose the industry can feel assured that the way out of its difficulties will be found. The remaining steps are, however, the hardest.

Who is there in these United States with the requisite authority based upon training, experience, and accomplishment who can be induced to tackle the job of directing the activities of this institute, one whose signature attached to reports, suggesting — as the result of the findings of the institute staff — what is best for the industry, will be accepted in a spirit of cooperation by fourteen hundred or more executives and followed to the letter?

Such a director cannot be chosen without having a very clear idea of just what work The Cotton-Textile Institute is to accomplish. Probably 75 out of every 100 cotton men will say this institute is to put the cotton industry back in the class of profit makers and with this is probably the feeling that all that is necessary is to start this organization. "Just let's organize" is an all too common expression in the human family.

The Institute's Job

The Cotton-Textile Institute has a job or series of jobs ahead of it if its work is to lead to the promised land. Let us list some of these jobs:

1. Gather statistics — national and international—of
   a. Production and consumption of cotton and cotton goods, classified as to use.
   b. Sales and prices of a great variety of cotton fabrics
2. Interpret these figures in relation to one another, to other textile fabrics and fibers and to industry and commerce in general.
3. Establish a department of market research, to study
   a. Marketing methods
      1. In the textile industry.
      2. In the other industries.
   b. Consider ways of extending present markets and to find new uses for cotton and cotton fabrics.
   c. Possibly apply cooperative advertising for the whole cotton industry.
4. Establish an engineering research department, to search for
   a. All ideas now being worked out in research laboratories of a public or semi-public nature and those made available through other channels touching upon cotton and cotton manufacturers.
   b. Put these findings in such shape as to make them available to the trade.
5. Establish an educational department. This is most vital. After gathering all the necessary information and making it available to its members in proper form the institute will probably find it necessary to embark upon the vital proposition of educating enough executives and subordinates in the industry in the proper application of this material. This educational effort will have to be kept at all the time if the work of the institute is to be effective.

Type of Man Needed

Inadequate as this outline is of the job ahead of the industry it is sufficient to indicate the type of man necessary to lead in the work. This man must needs be an authority in research, an economist of no mean ability to properly interpret the masses of national and international statistics in relation to one another, experienced in the application of these figures to large business problems, and possessing qualities of leadership which will enable him on the one hand to draw around him and direct the activities of a staff of qualified, able, conscientious hard workers experienced in the fields of

Economic and Statistical Research
Market Research
Engineering Research

and on the other hand because of his previous accomplishments, to express with authority the findings of such a staff and the reasonable interpretations to be put upon those findings. Such a leader with his staff will in less than five years' time demonstrate the worth of this institute to the industry by pointing the way out in very concrete fashion and if given proper cooperation will bring the industry into the promised land. Such a man I believe is to be found within a mile of Worth Street.

Oxy-Acetylene Welding by Textile Mills

Repairs on Many Machine Parts Made More Quickly and Inexpensively Than by Ordinary Methods—Production Increased by Saving in Time—Waste from Scrapped Castings Reduced—Work Includes Welding Proper, Cutting, Coating, and Building-Up of Worn and Undersized Surfaces

THERE are three classes of work that can be done in a textile mill with an oxy-acetylene outfit. These are welding proper, cutting, and the building-up of worn or undersized surfaces. Welding proper is the joining together of separate parts, and in the repair of broken castings lies the greatest field for gas welding in a mill. Just consider for a moment the vast range of possibilities for such work in a mill repair-shop. To list the names of the machine parts that have been or can be successfully welded would be to give a complete list of every part of every machine that enters into textile work. Levers of all kinds, brackets, gears, pulleys, stands, frames, loom shafts, lay-swords of looms, shuttle boxes—the variety is almost infinite.

By the use of the welding torch is saved either the considerable expense of lengthy repairs in the machine shop on the broken casting if repairing is possible, or the expense of a complete new casting if the broken one cannot be repaired. As a general rule the expense of the welding job is but a fraction of what either of the other expenses just cited would be. The shorter time consumed in doing the welding work as compared with shop-work is an important item, particularly if the machine is stopped by reason of the broken part. The welded casting will be as strong as before, in fact, probably stronger, for castings thus welded frequently break again but rarely in the weld. Loss of production due to broken parts of machines is much reduced in a plant where welding is done, because of the quick repair feature involved. This feature alone is an important one in these days of capacity production.

Closely related to welding proper is the building-up of worn, broken, and under-sized parts as distinguished from the joining together of two separate pieces. Here again is a wide and profitable field for the use of the oxy-acetylene torch in a textile mill. In most instances of repairs of this type, were it not for the torch the parts in question would have to be thrown to the scrap heap and new ones purchased, since repairs of any other nature would be most costly and difficult, if at all possible. The building-up of broken or worn gear teeth is a very common and profitable instance of this nature.

Repairing Gears

Fig. 1 shows several examples of both true welding and also of the building-up type of work. The large-toothed washer-gear marked A shows two teeth completely broken off. Gear marked B shows at the white marks where two teeth were similarly broken in a gear of the same kind. Two teeth taken from an old gear kept for this purpose were welded on to the rim of the broken gear with the result as shown. The entire job consumed perhaps 15 minutes. The weight of the gear was 60 lbs. One can readily understand how the cost of a new casting plus the labor of machining the gear would be quite a number of times the cost of the welding job.

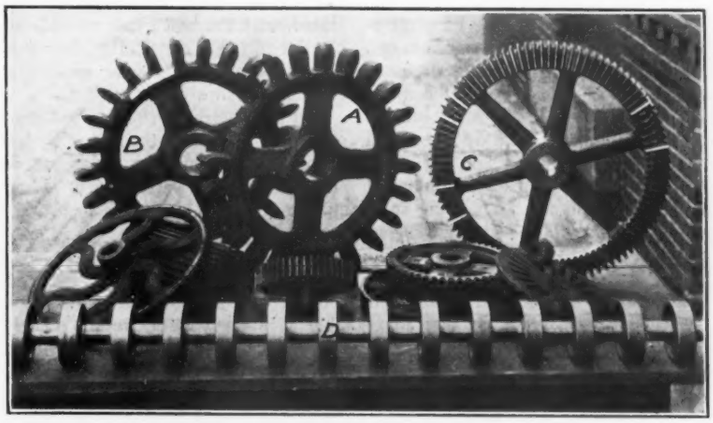


Fig. 1. Gears, Gear Guard and Worsted Spinning Roll—Typical Machine Parts Adapted to Repairing by Oxy-Acetylene Welding

At C is shown an example of a gear to be built up. This gear as shown in the photograph has not yet been repaired. The partly broken teeth lie in between the white lines. This gear is quickly identified as the combined bevel and spur gear of a worsted loom. In this case the welder will first build up the broken teeth. The gear will then be taken to the machine shop where the built-up teeth will be formed and shaped, either by hand or—what is better still, as one mill that has a considerable amount of this work to do declares—the gear will be mounted on a specially fitted gear-cutting machine that runs a gear cutter through the spaces between the built-up teeth. The economy of this method of repair is very evident. The other gears in the photo show typical cases. Note at the left and in front of gear B the quarter gear from a loom dobby head. This is a common piece of repair by the building-up process.

Worsted Spinning Roll

Part marked D lying along the front of the table in Fig. 1 shows an exceptionally good instance of the value of the building-up process. This piece will be recognized as the bottom front roll of a worsted spinning frame and is made up of cast iron turned and fluted bosses shrunk-fitted to a steel shaft. Frequently a boss will become so badly worn down, or several flutes will become broken to such an extent, that the roll can no longer be used, as the damaged part would cut the leather top roll and also the yarn. The old method of repair was to remove all the bosses until the damaged one was reached. A new boss would be put on and the ones removed would be replaced. Often some of those removed would be broken in the process; and, if the defective boss happened to be in the middle of the roll, it will be seen that the entire job would be an expensive and lengthy one. With the welding torch, the worn or otherwise damaged boss will be built-up with new metal, the roll put in the lathe, and the boss turned up and fluted—all at a relatively small labor and material cost.

Fig. 2. Gill Box Screws, Loom Crank Shaft, Shuttle Boxes, and Other Machine Parts

Gill Box Screws

Yet another fine example of building-up work is shown in the two pieces lying at the extreme left and diagonally across the table in Fig. 2. These will be recognized as gill screws and are essential parts of gill and drawing boxes used in the manufacture of worsted yarn. Certain parts at the screw end are subject to severe usage and show excessive wear. The completed piece is a costly one to make, as special steel is required and the machine work is considerable. Shop repairs by ordinary methods are also costly. With the welding torch and Swedish iron rods (steel is often used) the worn parts can be built up and reshaped and the piece hardened, all at a relatively small cost.

French Comb

In many textile machines there are parts that are subject to great wear at certain places only. When these spots become badly worn, as they sometimes do, the entire piece must be thrown away. Typical instances of this nature occur on French combing machinery. This class of machinery, which, by the way, is all imported from France, is noted for its material, workmanship and finish. The parts are finished all over to metric-system measurements, and duplication in the mill repair shop is difficult and costly. New parts from abroad are also very costly, and much time is consumed in obtaining them. It is very convenient, therefore, to be able to build up the worn spots.

Recently there has been introduced to the trade a new metal rod for use in building up this and similar work. This new metal is called "stellite," and

* The welding outfit necessary for this work was described in detail in the article "Oxy-Acetylene Welding Equipment for Mills," published Aug. 7, 1926.

is an alloy of chromium, tungsten, and cobalt. The metal is extremely hard after being deposited and does not anneal on cooling. The built-up surface cannot be finished with a tool, and must be ground. Experimental work is now being done using this metal to build up worn portions of gill screws, loom cams, parts of French combs, and other pieces where great resistance to localized excessive wear is desired. Certain precautions are necessary in using the welding flame in order to get satisfactory results, but they are simply a matter of practice and detail. Representatives of the company that is putting out this metal are very glad to come to a plant to do trial work and fully explain the methods to the welder.

Returning to the matter of true welding, in the foreground of Fig. 2 will be seen and recognized a loom crank shaft, a very common item of repair, particularly in mills that have heavy wide woolen and worsted looms. The break is usually at the crank part. The shaft shown was broken at this place and has been welded. Back of this shaft will be seen two shuttle boxes. These are of malleable iron and have been brazed, using Tobin bronze as the welding metal. Other parts shown in the photograph are from looms. Some have been brazed and some welded. The erect piece is a lay-end. As previously stated, the variety of work that can be welded is almost infinite, and embraces parts of every machine in the mill.

Use of Cutting Torch

By the use of the cutting torch, great savings in time and expense can be had. If steel tanks are to be dismantled, a boiler-house flue taken down or altered, structural iron of any form to be cut off or shaped, either in repairing old work or in the construction of new work, the cutting torch will be found to do the job far more quickly and therefore more cheaply than any other method. Steel plate can be cut to any desired shape in but a few minutes time. Where riveted tanks or riveted structural iron work is to be taken apart, a special rivet-burning tip is used. This tip is flattened and slightly curved at the end so as to be more efficient. When doing riveting work the welding torch will be found very useful for heating the rivets instead of a furnace, each rivet being heated singly and as it is required. Large, heavy castings can be cut in order to facilitate removal, although the larger pieces demand more than common skill and practice if the work is to be done with minimum expenditure of time and gas.

Much progress has been made during the last two years, and is still being made, in the development of automatic cutting machines. The greatest field for the use of such type of equipment in the textile industry lies not in the mills but in the shops of the textile machinery builders. Where there is much sheet metal cutting in duplicate to be done, regardless of the thickness, the automatic machine will be extremely economical to use. A certain loom builder now cuts out an oval hole in ½ in. plate at an expense of ten cents, whereas by hand the cost was one dollar. In another instance a special shape in ½ in. stock was cut out by using a hand cutting torch and then grinding the part to size, all at an expense around seven dollars. Now by using the automatic machine the entire job is performed at a total cost of less than one dollar.

There is yet another application of the oxy-acetylene process—which could not exactly be called "welding"—in the so-called "metalayer" process as put out by the Metals Coating Co. of America. This process applies to any surface a coating of any commercial metal for the purpose of protecting it from corrosion, acid action, etc. Briefly, the process consists of automatically feeding a wire of the metal of which the coating is desired into an attachment that is held in the hand similarly to a spray-painting tool. Oxygen and acetylene are conducted to this tool and are burned as in a welding torch. The metal wire, fed regularly into the flame, is melted and atomized, and the resultant molten metallic spray is deposited in an even layer of any desired thickness upon the surface that is to be coated. It would seem that this process would find application in textile mills for coating the insides of tanks for holding waters that must be free of iron, or for storing acids and other corrosive liquors. As a production equipment, it is being successfully used for applying metallic coatings to dress goods, upholstery coverings, hangings, etc., to provide unique decorative effects. Mention is made here of this process simply as illustrative of yet another use for oxy-acetylene equipment in the textile mill.

Principles of Welding

While this article is not intended to instruct one how to weld, yet it might be well to make mention of some of the cardinal principles involved and a few of the essential points of successful operation. The Welding Encyclopedia, an excellent reference book on the subject, classes the several operations involved in the welding of cast iron, for instance, in their rank of relative importance as follows:

1. Preparation of the weld.
2. Selection of the proper filler rod.
3. Selection of the proper size of tip.
4. Regulation of the welding flame.
5. The welding operation itself.
6. The after-cooling.

To describe these points briefly: First, it is very necessary that the two broken pieces of metal where they meet be beveled or cut in a "V" form, particularly if over ¼ in. thick. If the piece is over ½ in. thick, it is advisable to bevel on both sides. This is done so that the welding metal can reach to the very bottom of the "V" at the beginning of the job and fill in the "V" as the work progresses, giving at the completion a union of the two parts made up of solid welded metal. A weld that is not built up in this manner is almost sure to prove defective. The broken surfaces must be freed of all oil and grease before starting to weld. Experienced operators will "V" out the iron with the torch, while the less expert will cut it out with hammer and chisel or grind it out. Often to prevent sudden expansion due to the shape of the casting or to its large size, it is necessary to preheat the parts by some means before welding. On special work sometimes one operator will keep the parts of the casting adjacent to the weld hot with one torch while the welding operator will do the welding work with another torch.

2. Proper filler rod. As previously stated, only the best grade of rods and of the proper metal for the work should be used. A poor quality of rod may mean a defective weld.

3. Proper size of tip. If too much gas has to be forced through a tip that is too small for the particular job, results will not be satisfactory. Large surfaces will require more heat and a larger tip must be used.

Regulation of Flame

4. Regulation of flame. There are four proper and distinct flames possible with the welding torch, namely, the pure acetylene flame, the carbonizing flame, the oxydizing flame, and the neutral flame. The pure acetylene flame is a broad luminous jet and is only seen when the torch is first lighted and before any oxygen is turned on. The carbonizing flame is one in which there is an excess of acetylene over oxygen. It is not ordinarily desirable to weld with such a flame, because the molten metal in the puddle will absorb the excess gas which as the metal cools will issue again forming pinholes. The oxydizing flame is one in which there is an excess of oxygen. In this case, the excess will tend to unite with the molten metal, forming oxides, which in turn will form slag pockets in the weld. These not only make a dirty looking weld but may make it defective.

One of the functions of the acetylene gas is to surround the center of the jet and the puddled metal of the rod with an envelope of burning gas which completely and effectively shuts out the oxygen of the air, preventing the formation of oxides and the subsequent contamination of the weld. It is impossible to entirely prevent this, and one reason for using the flux is that it unites with and conducts away any oxides that may be formed.

Previously in this article we referred to the use of a new combination of metals under the name of "stellite." When using this metal, it is customary to have the flame on the excess acetylene side, because it is very necessary that no oxides be formed.

The fourth type of flame and the one that should be used in all ordinary welding is the neutral flame. In this flame the oxygen and actelyene are each in the proper proportion, and there will be no tendency for the molten metal to carbonize or oxidize. It would make some length of text to describe the appearances of these several types of flames, but a learner can be quickly shown how to distinguish them and how to obtain them.

5. The welding operation. The proper method of welding can be better taught by doing the actual work than by pages of description. It is concerned with the proper heating of the adjacent metal, the melting of the rod, the freeing of the puddled metal of all slag or other impurities, the progressive uniting of all parts of the two pieces with the welding metal, and finally the finishing off of the welded surface.

6. The after-cooling. A welded casting or at least that portion at the weld should be buried in a heap of ashes immediately after the work is completed in order that the cooling will be gradual. By doing this, warping of casting, hardening of the weld, and sometimes even new fractures due to unequal and sudden cooling will be prevented. A properly cooled weld can easily be machined.

What Sparks Indicate

When doing welding work, if sparks appear, it is a sign that the metal is being burned. In using the cutting tool on steel, the reverse is the case; that is, the sparks do and must appear. First the metal is brought up to the right heat by using the welding flame. Then the auxiliary or cutting jet of oxygen is opened, thus supplying the excess of oxygen that unites with the heated iron and literally burns it out. In welding, however, no such burning is desired, hence the absence of the additional cutting jet in the torch.

It is not necessary for the operator to wear a helmet in working with an oxy-acetylene outfit. It is advisable to wear goggles of the proper color for the work. The oxy-acetylene flame contains no ultra-violet rays, and therefore is not so seriously injurious to the unprotected eye as is the arc of an electric welding apparatus, which is very rich in these destructive rays. In fact, one can watch a gas welding flame with the naked eye with nothing more than momentary discomfort, but it is not advisable. On the other hand, if too dark glasses are worn the progress of the work can not be properly observed and unsightly welds are apt to result.

Fire Hazards

What are the special fire hazards due to the use of oxy-acetylene welding apparatus? We will consider only those concerned in a plant that does not generate its acetylene but purchases both the gas and the oxygen. One of the most important points to be noted in the care of oxy-acetylene equipment is that absolutely no oil should be used on the connections, valves, regulators, gauges, or torches, particularly of the oxygen line and tank. The combination of oil and oxygen is most dangerous, and in addition the oil is very liable to rot the hose. If it be found necessary to lubricate the threads of the fittings, soapy water will be found to work to good advantage.

The records of the insurance com-

panies show that the majority of fires in connection with the use of gas welding and cutting equipment are caused by sparks or molten metal igniting wood or other combustible material. Now and then a fire will be caused by gas escaping from a leaky hose or from defective valves or fittings. We have already made mention of the fact that only the best of hose made particularly for the purpose should be used. Safety of life and property may depend on the quality of this part of the apparatus and there should be no question as to what kind to buy.

The welding headquarters as a rule is located in the blacksmith shop where there is or should be a non-combustible floor. The fire hazard is therefore slight. When, however, the equipment is taken out into the mill (as is often necessary when doing cutting work) then the fire hazard from flying sparks becomes considerable. A bad feature of this hazard is that the fires are most liable to develop, not immediately, but at some later time, perhaps several hours after the cutting work was performed. This often brings it into the night or inoperative period when there are no employes about except the watchmen as they make their rounds. Sparks will fly off and lodge in cracks and crevices, drop down holes in floors as around dye-kettles and tanks, find lodgment on timbers or in collections of lint and refuse. Here they will smoulder away for hours before they develop into anything serious.

When a torch is used there should be an ample supply of water instantly available if needed; and, furthermore, when the job is completed there should be a thorough inspection made of all possible places where sparks might have lodged. If possible, all suspicious places should be drenched with water. The night watchmen should be notified that the torch has been used in such a location. They will then make frequent inspections during the night to make certain that no fire is present.

Explosive Properties

No leak of either gas or oxygen in any part of the apparatus should be tolerated. The explosive range of a mixture of acetylene and air is from 3½ to 82% of acetylene. This is a wide range and means that almost any mixture is explosive. This is quite different from mixtures of gasoline, naphtha, etc., for in these cases the explosive range is narrow, being confined to a relatively small percentage of the volatile liquid. The explosive force of an acetylene-air mixture is much greater than that of an air and illuminating gas. Acetylene has a low ignition point, around 900 deg. F. This means that it does not require a free flame to explode it as does illuminating gas, but that it can be ignited by a glowing splinter of wood for instance.

As previously stated, the acetylene tanks must not be subjected to sudden shock or to high temperatures; as, in the first case particularly, dissociation of the gas may occur with explosive result. Several other points might be noted in the care of the outfit. When admitting the gases from the tanks to the regulators, the valves should be opened very gradually so that no sudden rush of high pressure gas will injure the regulators. When not using the torches, it is well to close the valves on the tank side of the regulators so as to relieve them of the high pressure.

Introducing Equipment to Mill

What should a mill executive do who wishes to introduce gas welding into his plant? First, he should purchase preferably a complete portable welding and cutting outfit similar to that described in the article "Oxy-Acetylene Welding Equipment for Mills" published in the Aug. 7 issue. He should buy only from a reliable firm of established reputation. Next he should choose from among his employes one who is intelligent and energetic, a man familiar with metals and the heating of metals. This man will be gladly given complete instructions at the start by representatives of the company from whom the equipment was purchased.

Many welders are taken from the blacksmith shop. Blacksmiths seem to grasp the principles and methods quickly, as they are familiar with the proper heats and temperatures of metals, and the properties and behavior of the various kinds of steels and irons when heated. They usually make good welders. The man will have to learn to weld by welding. He will make mistakes, that is to be expected, but every mistake will be a lesson learned. The mill should subscribe to the magazine "The Welding Engineer," which is an excellent monthly publication dealing exclusively with welding. This magazine should be given to the welder each month for him to read and study. It is as good as a text book, even better, for it is always up to date.

The "Welding Encyclopedia" is an excellent reference book detailing all the processes and defining all words and terms used in connection with the work. It also gives instructions on how to do welding work. The book can be obtained from the publishers, The Welding Engineer Publishing Co., 608 So. Dearborn St., Chicago, Ill. Let the welder use it for his reference book.

Educational Meetings

If the plant is located so that the welder can attend any of the demonstration or instruction meetings of the American Welding Society it would be of great advantage for him to do so. During the last several winters, such meetings have been held in Boston. Lectures, talks, moving pictures of actual work, and work demonstrations have made up the varied programs. Among the subjects covered were die welding, cast and sheet aluminum welding, cast iron welding and brazing, automatic welding of fliers, hand and automatic cutting, cast iron cutting, etc. These meetings were open by invitation to interested parties, and have proved to be of very great value to mill and all welders.

Then again some of the welding equipment makers have had demonstrations and exhibitions at their own shops. At some of these meetings in the past not only have their own experts given demonstrations, but welders from the mills have done likewise. There is nothing that will so convince a doubtful buyer as to the value of an outfit or the possibility of doing certain work as to see a man from a similar plant doing the work before his eyes.

The purpose of this article has been to emphasize the value to a textile mill of the oxy-acetylene welding process. No mill, small or large, can afford to be without one set of equipment at least, and the larger mills can at times make profitable use of several. Neither the first cost or the maintenance cost is great. The capital invested is small, and, when the outfit is not being used, the upkeep expense is limited to the interest on the investment, a negligible charge. The gases do not deteriorate if not used, and at such idle times the man who does the welding will be employed at other work. The entire cost of the apparatus will be quickly returned in the value of material saved and reclaimed from the scrap heap by the welding process. The fire and explosion hazards are slight if certain simple precautions are taken. Once an equipment is purchased and used in a mill shop, the foreman of that shop would never consent to be without one again. There is really not one logical argument against its use, and there are many in its favor.

Power Data Sheets

By F. S. Root

POWER REQUIRED TO OPERATE A SMALL KNITTING MILL 4 (CONT.)

One Merrow edger.,
One Union special coverseamer.,
Two Metropolitan staying machines.,
One Singer finisher.,
One Merrow shell.,
One Wheeler & Wilson tucker.,
One small emery-wheel,
One small buffing wheel

ANOTHER SMALL SIZED KNITTING PLANT.

PRODUCT Men's union-suits.

POWER FURNISHED BY A SINGLE 10 H.P. MOTOR

Motor belted to shaft driving six Scott & Williams knitting mchs., two winders, and twenty sewing-machines. Kilowatt hours per month, 525

POWER REQUIRED TO OPERATE LARGE KNITTING PLANT. 5

PRODUCT. Knit Underwear, plain & fancy.

POWER. Nine motors installed, total name-plate rating, 183 H.P.

OUTPUT. About 1010 dozen garments daily.

OPERATION. Day and Night shifts.

OPERATING DATA.

Average consumption of Electricity per month, 32,500 Kilowatt Hours.

LOAD FACTOR, on 24 hour basis = 32 o/o.

POWER CONSUMED, per 1000 garments turned out averages 105 Kilowatts.

CURRENT SUPPLY. A.C., 60 Cycles, 220/440 volts. (CONT.)

POWER REQUIRED TO OPERATE LARGE KNITTING PLANT. 6 (CONT.)

MOTORS & LOADS

10 H.P., 1200 R.P.M., Squirrel-cage motor, belted to 210 feet of line shaft driving —

Seven Geo. Payne skein-winders, 48 Skeins.,

Seven Campbell Clute skein winders, 48 skeins.,

Two Snyder skein-winders, 48 Skeins.,

Forty "Wheel type" skein-winders, 240 winders, total. (Six winders per wheel).

One G.P. Skein winder.,

Two yarn-chaining mchs.,

Twenty-nine, Scott & Williams tubular knitters, diameters as follows —

1-11", 3-12", 5-13", 3-14", 2-15", 3-17", 3-18", 4-19", 2-20", 1-21", 1-22", 1-23".

(CONT.)

POWER REQUIRED TO OPERATE LARGE KNITTING PLANT. 7 (CONT.)

20 H.P., 1200 R.P.M., Squirrel-cage motor, belted to 150 feet of line-shafting, driving —

One-1/4 K.W. D.C. Generator supplying current for Eastman Cloth-cutter.

Five, Cooper tubular knitters, (23 Inch.)

Three, Tiffany double collarette knitting machines,

Fourteen, Thompkins Tubular Knitters, cylinder diameters being as follows—

1-21", 1-20", 2-19", 3-18", 2-17", 2-16", 1-15", 1-14", 1-12".

One, 36" Exhaust Fan.

Four, Davis & Furber napping machines, 10 ft. rolls.

20 H.P., 1200 R.P.M. squirrel-cage motor, belted to line-shaft, driving— (CONT.)

Above is presented the twenty-first group of records showing the power required to operate textile machinery.

A Year of Cotton Industry Research in England

Annual Meeting of British Cotton Industry Research Association Hears Report by Kenneth Lee, Chairman—Textile Institute Proposes Rayon Department—Results of Research on Smaller Cards, Mildew Effects, Regain, High Drafting, Sizing, Scouring, Tendering by Light, Effect of Humidity, Etc.

THE progress made in the practical application of research to industry was referred to by Kenneth Lee of Tootal, Broadhurst, Lee Co., chairman of the British Cotton Industry Research Association, at the annual meeting held in the Textile Institute, Manchester, on September 14. The research staff, he said, now numbered 92, of whom 44 were university graduates. The work accomplished at the Institute during the last 12 months had been greater than at any period since the foundation of the association. Accumulation of fundamental facts was now leading to their application to trade purposes.

Small Cards Possible

"As an example of this," said Mr. Lee, "I would mention the investigation of the carding engine by the Physics Department. The question asked was, 'What happens to the various kinds of fibers during the carding process?' The answer to that question is that immediately the cotton leaves the taker-in it is blown on to a few flats and the fibers are picked off from these flats by the cylinder wire without being handed to forward flats. Consequently the card will work just as well with a small number as with a large number of flats, and this has been established by mill trials on a medium American cotton. The mill tests on Sak cotton are not completed. Our tests show that the present carding engine is a very efficient machine, and although a new machine has been constructed with only 13 flats in working position and a small cylinder, we cannot claim that it is more efficient, although owing to its having a small cylinder and few flats, it is less expensive to manufacture and takes up less room.

"Our further investigations into the other spinning processes show that although the blowing room machinery does not produce an even lap for presentation to the card, the drawing frames, owing to the number of doublings given to the sliver, largely eradicate the irregularities which exist in the lap, and are carried through the carding engine. Between one inch and another of the lap, not necessarily consecutive, of course, you may find 40 per cent. difference in thickness, and it must be remembered that the card handles such small lap lengths individually. After you have passed the three heads of drawing, that difference has been reduced to 5 per cent. and sometimes less. This illustrates the efficiency of the draw frames in producing regularity."

May Have Rayon Department

A proposal had been made that an artificial silk department of the Institute should be formed to carry out research work on the utilization of artificial silk in conjunction with cotton. This department would be financed quite independently. The Council had decided that the cotton program should not be interfered with, whether work on artificial silk is taken up or not. It is estimated that the new department would necessitate a capital outlay of from £5,000 to £6,000 for buildings, and an annual expenditure of from £2,000 to £3,000. Negotiations were now taking place to ascertain whether sufficient support will be forthcoming to justify the project being carried out.

Sugar on Cotton Hairs

The directors' report was then read by Mr. Tansley, in the absence of Dr. Crossley owing to ill health. The report stated that another successful season has been experienced. The principal variety grown has been Acala, and only a few Egyptian and Indian plants of special interest were added. A start has been made with the investigation of those products which concern the bleaching process and the liability of cotton to mildew attack. In the latter connection the discovery has been made that, in the young stage in the boll, up to at least 26 days of age, the hairs are coated with a slime which is very rich in sugars. This no doubt accounts for the liability of the boll to attack by rot fungi, and for some portion of the initial infection of raw cotton by mildew.

Tendering by Mildew

As a result of treating the hair with various dyes it has been possible to develop a method—the Congo Red method — for demonstrating the amount of damage, or tendering, suffered by cotton fibers under the action of mildew, heat or acid, or under mechanical damage. This method has proved of considerable assistance in the examination of cases of tendering. It has, for example, been the means of enabling it to be shown that in yarn breakages the break takes place mainly by rupture of the individual hairs, and not by slipping of the hairs over one another. The method is also being applied in the investigation of the question of damage to cotton at different stages of spinning and manufacture.

A special study has been made of the dipping process in yarn conditioning. It has been shown that the customary method of dipping ring yarns (shallow immersion for several minutes) is capable of improvement. A much better method has been devised whereby prolonged immersion is rendered unnecessary, greater evenness is produced, and the risk of straining diminished.

The problem of yarn straining of conditioned ring yarns has now been almost completely worked out. It has been shown that the bacteria responsible for the straining increase enormously in numbers in the conditioning water as dipping proceeds, and that these numbers can be kept down successfully if formalin is added to the conditioning water.

Standard of Regain

At the request of the Federation of Master Cotton Spinners' Associations a series of experiments has been commenced to determine the average regain of raw cotton and yarn exposed to ordinary atmospheric conditions, for which purpose a special hut has been constructed in which samples can be exposed and weighed every day. The construction of this hut is such that the outside air is allowed free access to the samples, which, however, are fully protected from actual wet, i. e., they are kept "dry" in the popular sense of the term. The average "natural" regain can thus be determined over a complete cycle of meteorological conditions. A similar research was carried out by the Bradford Corporation some years ago in order to fix standards for the different forms of wool.

A study has also been made of the process of drying cotton by hot air as carried out in the determination of regain. It is well known that the "dry weight" depends on the temperature of drying, and this has been attributed to the loss, at high temperatures, of water which cannot be driven off at lower temperatures. It has been shown, however, that the decrease of "dry weight" with rising temperature is mainly due to the diminution of the relative humidity of the hot air, and that if perfectly dry air is used the effect of temperature on the "dry weight" is much smaller. This is of importance in actual commercial testing. Even when care is taken to regulate the temperature of drying, the result of the test will vary slightly with the atmospheric conditions prevailing at the time.

High Draft Yarns

Complete examinations have been made of the yarns spun on Dobson and Barlow's H.D. system, on various H.D. systems at Tweedales and Smalley's, and on Howard and Bullough's H.D. system, with corresponding low draft yarns. In all cases, on counts, twist, breaking load, and photographic tests there is no significant difference for trade purposes between the results of tests, and the high and low draft yarns are equal in quality and regularity. This in conjunction with previous results obtained from the Casablancas and Platt's (C. S. and L.) systems, is, of course, consistent with the remarks relating to the speed frames that the main spinning faults may be definitely attributed to the speeds. It should be pointed out that on no H.D. system is there any greater damage done to the fiber than on the low draft systems.

Scutcher Tests

From measurements on the irregularity of card sliver it is possible, taking into consideration the draft of the card, to calculate the irregularity of the finisher lap over small lengths comparable with the size of the lumps of cotton in the lap. The irregularities over such short lengths, which are of primary importance for carding, were found to be of the order of 40%, and this has been confirmed by examining laps of Texas, American, Memphis, Egyptian, and Sakel cottons from 10 mills, the maximum variation being on the average 40%, and the probable variation 5% to 6%. As an outcome of this work the designs of a modified finisher scutcher are now under consideration.

The sliver and roving regularity tester and the cohesion impact tester have been in continuous use for testing products of the card, comber, draw frames and speed frames during the past year. Card room products from four mills and machinery room samples prepared at the Shirley Institute have been exhaustively examined, and the effects of each process in the card room studied. Tests of the hank and cohesion of each product indicate that the parallelisation of the fibers and the regularity of the product increase from the card to the finisher head, the parallelization being definitely accelerated by the comber. In the speed frames the irregularity of the products increases, but it must be clearly emphasized that the direct comparison of speed frame products with slivers is not strictly legitimate on account of the progressive introduction of twist which makes the products of consecutive processes not of a strictly comparable nature.

Sizing Experiments

The dependence of the properties of a warp or a piece of cloth on the conduct of the sizing has been further examined for light sizing by full scale experiments in which an accurate record has been made of the rate of breakage of specially treated warps, and for heavy sizing by a detailed examination of the normal industrial operation. In the weaving experiments warps have been sized with different weights of size, and then woven simultaneously in the same shed. The number of breaks in a given length of cloth is found to

(*Continued on page 101*)

Tunney and the Spinners Break Even

Each Detracts from the Other's Party, but Then What Will You?—We're Talking About the Sixth Annual Field Day of the National Association of Worsted and Woolen Spinners—For Further Details, if You Must Suffer, Read On

By Jack Card

THE legal aspects of the Sixth Annual Field Day of the National Association of Worsted and Woolen Spinners, held at the Manufacturers' Country Club, Oreland, Pa., must not be overlooked.

It is now a matter of history that the injunctions applied for by Tex Rickard, Gene Tunney, Jack Dempsey and Gov. Pinchot, severally and individually, against the association collectively, and Ern. Townson, Billy Richardson, Tom Ball et al., individually, were denied by a learned judge who knew more about golf than he did about prize fighting.

It is also a matter of history—although not so historical—that Billy, Ern, Tom, etc., had legal designs against the other crowd—but didn't do anything about it.

Stooping to the level of the so-called average reader, we might explain that Tex gave a party in Philadelphia on the identical Thursday night. His w. k. commercial acumen enabled him to sense the fact that a gathering of worsted and woolen spinners—whatever they might be—could easily decoy two or more cash customers, at $27.50 apiece upwards, from his well-guarded gate. He tried to do something about it—but failed.

On the other hand, Ern and his gang, having in mind an evening party at the above-mentioned club, sensed the possibility that a few of the members might travel to the city without dining or, more important still, without paying their dinner checks.

All of which was as it was.

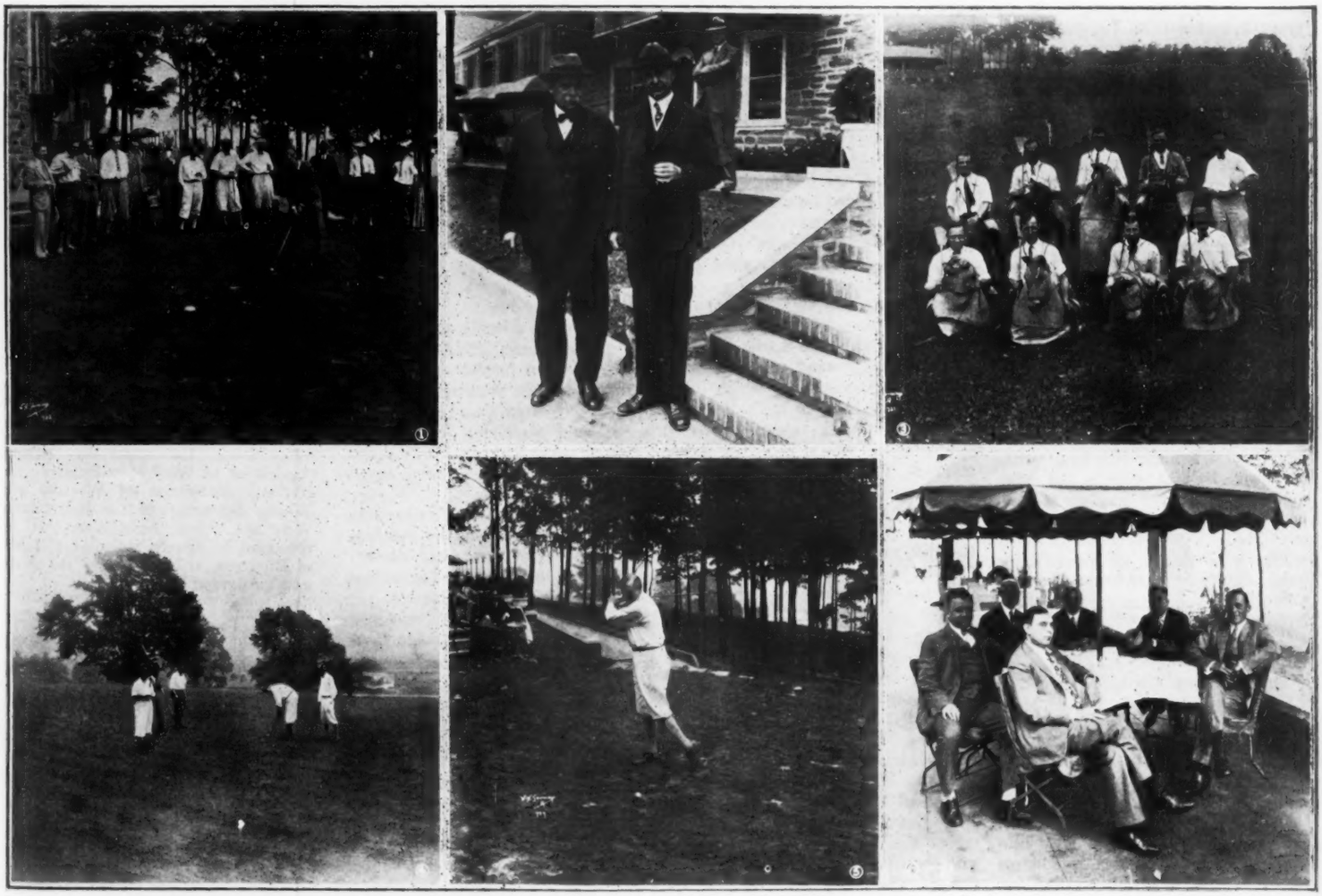
However, Gene, lest you do not have the reading habit, had a very successful evening; Jack collected some change with which to assuage certain noticeable wounds; Tex undoubtedly made a dollar or two; Gov. got a free ticket to the fight; and the spinners had the best of the six outings held thus far in their history.

Wherefore complain?

Searching for a Keynote

We wish we hadn't exhausted our verbal ammunition so brilliantly last year in discussing the creek which forms such a mentally destructive

THE CAMERA NEVER LIES



With full knowledge of the danger of libel suits involved, we present today, for the edification of our readers, the above formal and informal glimpses of the annual field day of the National Association of Worsted and Woolen Spinners.

(1) Here is where galleryitis got in its dirty work. C. E. Doan, driving off from the first tee, is the "subject" selected. The admiring spectators include Ernest Townson, chairman of the Field Day Committee, who may be identified as the left-hand member of the bow-tie threesome in the center of the gallery.

(2) President Thomas H. Ball (right) and Vice-President Warner J. Steel lend official dignity to the occasion.

(3) These, boys and girls, are the polo teams. Look 'em over. They line up as follows: Back row is the Boston team, comprising (left to right) L. Eschler, M. Guerin, L. Bagnall, R. O'Brien—with Ernest R. Townson, unfortunate referee, at the end. Front row is the Philadelphia team, including (left to right) J. E. Duval, H. Jefferson, "Mose" Krecker, R. B. Lehman.

(4) Rising triumphant from the Alpine slopes of the 18th hole, Secretary J. J. Nevins, still fresh as a daisy, holes out—or does he?

(5) Possessor of various titles, including member of the Field Day Committee of the association, secretary of the Manufacturers' Country Club, and "regular fellow," Billy Richardson also swings a mean driver.

(6) Yarn spinners spinning yarns. These gentlemen, all dressed up with no place to go, include, left to right: E. Carnell, President Thomas H. Ball, M. I. Davidson, Louis Galle, E. P. Fougeray and H. St. Clair Wagner.

feature of the Manufacturers' course. It was still there this year, wetter and more insistent than ever before. However, even our non-journalistic readers will realize that we can't repeat on this theme, absorbing (sic) though it may be.

Searching frantically for some key-note on which to pin this literary effort, it occurred to us that we might describe the accomplishments of the foursome of which your correspondent was purely a numerical fourth.

There's a subject for you. In fact, that foursome came in for more discussion than any other group of golfers on the course. Unfortunately, the argument finally became concentrated within the august body known as the Greens Committee of the club.

So that's that.

In passing, however, it might be mentioned that we face the future with the same intrepid serenity with which we faced the past, greens committee or no greens committee. We also announce that we'll be at the seventh annual field day, even if we have to adopt a different nom de plume and guarantee to replace divots.

Something About the Weather

However, all this personal stuff doesn't bring us nearer a key-note.

Of course, there was the weather.

Dawn rose diffidently on Oreland.

With it, rose—or sank—the fog. Sundry golfers, unaccustomed as they were to public speaking, groped their way to the first tee, hoping against hope that they might let loose one or more of their prodigious drives before the critical gallery arrived.

And still the fog rose—or sank. At any rate, it became foggier.

In the East, no sign of day's first breaking appeared. Hills and dales were clothed in nature's dewy blanket. And from the club-house dribbled, one by one, golfers and non-golfers prepared to snicker at anybody's effort, courageous though it might be.

Finally, a member or guest—name unknown—approached the first tee with all the confidence of a gazelle—and smote a wicked ball thirteen feet, seven inches, straight down the fairway.

Thus was the day begun.

What Happened

Having stalled along thus far, it is incumbent upon us to relate just what took place—and why.

As to golf: The President's Cup, absorbed last year by the lyric tenor, John J. Hosey, this year wafted into the possession of Gordon Bottomley, whose net was 73. First prize for low net went to Percy Ainsworth, whose 69 was pretty good but who, as a non-member, couldn't cop the cup.

In introducing Frank Mirch, who captured second low net with a 76, we wish to announce in stentorian tones that Frank made the 18th hole in 3. Rated as par 5, this impossible, excruciating, unexpurgated hole collects a 7 or 8 from a crack golfer—and a score or more from a dub. And Frank got an eagle!!

More low nets: Fred Wolstenholme, third, 77; Howard Young, fourth, 78; Jack Davis, fifth, 78.

And now we come to the low grosses. Take it from one who knows, those are the guys who get the rayon-lined autoclaves. Here they are: Low gross, G. H. Atherholt, 86; second, "Eggs" Quittner, 91; third, Stanley Lawton, 92; fourth, A. B. Otto, 95.

Also Rans

But the association, with all the backing of the great textile industry, had at its command a wild assortment of unmentionables which it insisted on awarding to anybody whose score was within reason. So scan the following roster, including names and net scores, of men who took home something they didn't want and couldn't explain:

Hollis Wolstenholme, 79; George Kreitler, 80; E. F. Nye, 80; Edward Legge, 81; John Hosey, 81; Fritz Quittner, 82; Eugene Jalbert, 82; Arthur Kreitler, 83; Stewart Louchheim, 83; H. G. Bottomley, 84; Ern Townson, 84; John H. Halford, 84; Herman Heller, 84 (look at all the H's); Geo. Barber, 85; Howard Bacon, 85; John Harrigan, 86; Geo. Grayson, 86; Ed. Jefferson, 86; Harry Lonsdale, 87; G. S. Jefferson, 87; Wm. Hetzel, 87.

And They Called It Polo

In describing one of the other major sporting events of the day, we call the attention of our readers to one of the photographs in the accompanying lay-out. (That's journalistically technical.) They will note a number of fully-equipped equestrians whose names are given in 8-point Bodoni italics. (Also technical.) From last reports, it seems that Boston, or the "Reds," won 5-2. It also seems that R. B. Lehman made Philadelphia's two and only goals. So it was Lehman against the field—and the field won.

Ern Townson lost. He was the referee. Quite seriously, we should think that Ern, with his wide experience in this sort of thing, would know enough to let certain jobs alone. Better luck and more sense next year, Ern, old boy!

Oh, What a Night!

And that brings us down to the evening.

Dusk fell.

So did others.

It's difficult to be coherent about this particular night.

Howsomever, here's what we know about the prandial details:

A certain number of the 150, more or less, participants in the field day broke bread at Oreland.

The Philadelphia Wool Trade Orchestra, Herbert K. Webb presiding, made those who stayed glad they stayed.

Several found it necessary to go into Philadelphia on business shortly before or after dinner. Most of them travelled incognito so we can't give any names.

Both of those who remained had a wild party at double Canfield.

Those who didn't stay lost their awe of channel swimmers. They encountered and overcame more water than did Gertrude Ederle and any five of those who broke her record within the next fortnight.

Who Did It?

Before we get morbid about that moist tour of exploration a la taxicab from Philadelphia to Oreland, 4 A. M., Friday, Sept. 24, 1926, we might mention, in confidence, the names of those who labored long in the concocting of this unique event. The Field Day Committee, as we get it, was composed of: Ernest Townson, chairman; Wm. H. Richardson, Harry Wasson, Richard O'Brien, Edward Legge.

L'Envoi

And, by the way, Tunney won.

Wool Council Adopts Constitution

Receives Report of Organization Committee and Discusses Possible Directors

THE second meeting of the Wool Council was held Tuesday afternoon of this week at the Metropolitan Club in New York. The purpose of the meeting was to receive from the Committee on Permanent Organization its report. This committee made its report in the form of articles of association which, after careful consideration and with some slight alterations amending the text but not altering the sense, were unanimously adopted.

Following the adoption of these articles the meeting considered possible candidates for election to the first board of directors who will serve until the annual meeting next January.

The Council will hold its next meeting in Boston on Tuesday, Oct. 19.

The following were present: N. B. Kneass Brooks, Alban Eavenson, Edwin Farnham Greene, Abraham Koshland, Robert T. Francis, Stanley R. Stager, Nathaniel Stevens, Frederick W. Tipper, Herbert K. Webb, Walter P. Wright, Walter Humphreys and J. J. Nevins. Mr. Eavenson, who at the first meeting was elected temporary chairman, presided.

The articles of association as unanimously adopted, follow:

Article I

Name

The name of this organization shall be: Wool Council of America.

Article II

Object and Scope of Activity

The object of the Council shall be to promote the welfare of the industries interested in wool and its products.

Its activities shall be economic in character including trade research and the consideration of problems affecting the industry.

Legislative and political questions shall be excluded from its field of activity.

Article III

Membership

Individuals, firms or corporations engaged in, or affiliated with, the wool industry shall be eligible to membership. Application for membership shall be referred to the Executive Committee for action. Upon election each firm or corporation shall designate its representative in the Council.

Any member may be expelled by a majority vote of the Board of Directors for any act considered by the Board as injurious to the interests of the Council.

Article IV

Officers

The officers of the Council shall be a President, two or more Vice Presidents, a Secretary, a Treasurer and a Board of Directors numbering not less than twenty-four.

The Directors shall be elected annually by the Council for terms of three years, one-third of the number, as determined by the Council, to be elected each year. At the first annual meeting, in January, 1927, one-third of the Board of Directors shall be elected for one year, one-third for two years, and one-third for three years.

The President, the Vice Presidents, the Secretary and the Treasurer shall be elected annually by the Board of Directors. The President and Vice Presidents shall be ex-officio members of the Board. The offices of Secretary and Treasurer may be filled by the same person if the Board so determines. All officers shall hold offices until their successors are chosen.

Vacancies, caused by death or resignation, shall be filled for the unexpired terms by the Board of Directors.

Until the Annual Meeting of January, 1927, the affairs of the Wool Council of America, originally formed by two representatives from each of the following five trade associations, namely, the American Association of Woolen and Worsted Manufacturers, the Boston Wool Trade Association, the National Association of Wool Manufacturers, the National Association of Worsted and Woolen Spinners and the Philadelphia Wool and Textile Association, shall be conducted by officers, including a Board of Directors, to be chosen by the above mentioned representatives.

Article V

Executive Committee

There shall be an Executive Committee designated annually by the Board of Directors, to consist of the President, the Vice Presidents, and not less than five other members of the Board.

Article VI

Duties of Officers

The President, the Vice Presidents, the Secretary and the Treasurer shall perform such duties as are assigned to them by the By-laws. The Executive Committee under the general direction of and under the powers delegated to it by the Board of Directors, shall have the control and management of the affairs of the Council with authority to engage assistants, fix salaries, and to do everything necessary or desirable in the conduct of the business of the Council.

Article VII

Assessments

The amount and time of assessments or dues of members shall be determined by the Board of Directors.

(*Continued on page* 123)

Textile Session Features Engineers' Meeting

American Society of Mechanical Engineers Devotes Part of Its Meeting to Two Textile Papers, One on "The Cotton Textile Industry," by Charles T. Main and Frank M. Gunby, and One on "Power Losses in Cotton Textile Mills," by George Wrigley

THE increasing interest which technical men in general are taking in matters pertaining to the textile industry was again indicated this week by the fact that the American Society of Mechanical Engineers incorporated a special session on textiles at its "Old Dominion" meeting held at Richmond, Va., Monday to Friday.

The textile session took place on Tuesday and was marked by the presentation of two important papers. The first of these entitled "The Cotton Textile Industry" by Charles T. Main, of Charles T. Main, Inc., engineers of Boston, and Frank M. Gunby, associated with Mr. Main, analyzed the difficulties confronting the textile industry today and compared conditions surrounding the manufacture of cotton goods in the North and in the South. This paper had added interest in view of the fact that Mr. Main is a past president of the society. It is printed in part below.

Power Losses in Mills

A very excellent paper entitled "Power Losses in Cotton, Textile Mills" was presented by George Wrigley, electrical engineer with J. E. Sirrine & Co., mill engineers, Greenville, S. C. This paper dealt with power losses within the mill and suggested the difficulties and possibilities of reductions. It was pointed out that much has been done, and is being done, for the betterment of power generation, but that the losses in transmission and utilization are too generally accepted as necessary evils for which there is no remedy or amelioration. It is the author's hope that thought will be given to these losses looking toward the reduction of any possible waste.

Charts illustrating Mr. Wrigley's paper were not available when this week's issue of TEXTILE WORLD went to press; consequently it will be published at a later date.

The Cotton Textile Industry

The paper on the cotton textile industry by Messrs. Main and Gunby follows in part:

It is less than 200 years ago that inventions which are responsible for the great changes in methods of textile production were begun, and it is only a little over 100 years ago that the power loom was perfected.

From 1775 to 1790 several Englishmen familiar with the cotton industry and machines used at that time came to America and manufactured goods in a small way. After 1790 power looms were introduced and small mills were built. In 1815 the first mill was built by Francis C. Lowell, at Waltham, Mass., in which all the processes involved were carried on.

The progress of the business of cotton manufacturing was thereafter continuous in the northern states, but in the South there was a greater fluctuation. By 1850 the industry in the South had progressed to a point where the effect of southern competition was being given serious consideration by the northern mills. Soon after the Civil War occurred and the industry in the South was destroyed, and it was not until 1880 to 1890 that its present growth began. Since 1890 its growth has been rapid and continuous.

In the northern States the industry as a whole was prosperous from the time it started until about 1920. Since then, while individual mills have been prosperous, the majority have not been.

In rehabilitating her cotton mills, the South was largely dependent upon capital from the North. On the whole, her mills were only fairly successful, and many were unsuccessful, up to 1914. From 1914 until 1921, everyone owning a few spindles, North or South, could make a profit, and during this period most of the southern mills, and the South as a whole, got established on a firm financial basis.

When the great demand for goods dropped off in 1921, it was discovered that the southern mills were able to lower wages and operating costs well below the peak during the war, and that the northern mills could not reduce wages nearly so much. This difference produced a serious handicap for the northern mills.

Competition of the southern mills, however, is not the only thing which has caused such disaster in the industry during the last two years, but it is an important factor, and one which will last for some time to come. No one can tell how long the differential in favor of the South will last, or if it will ever be wholly eliminated.

There are some fundamental economic conditions that probably cannot be eliminated. So long as the supply of native-born labor in the South is equal to the demand, and the cost of living in that section lags behind the cost of living in the North, just so long will the South have an advantage. Transportation of raw materials will be less in many places. The cost of power will be less in most places. So long as the cost of labor is less, the cost of construction will be less.

There are other advantages that may prove to be only temporary.

During this present period of depression the southern mills have also suffered losses, but nowhere near the extent of those in the northern mills. The other branches of the textile industry have also suffered.

The total number of spindles in the world has increased from about 103,100,000 in 1900 to 166,000,000 in 1925, an increase of about 61%. Great Britain has about 60,000,000 spindles, the United States about 38,000,000 spindles, France and Germany approximately 10,000,000 spindles each, India 8,000,000, Italy 4,600,000, Japan 4,500,000, and China 3,600,000.

Table 1 shows the active spindles by years since 1900 for the whole country and for the cotton-and non-cotton-growing States.

The number of spindles North and South are now nearly equal, and the indications are they will be equal within a short time. But this is not so serious as the number of hours the spindles are run.

The laws of Massachusetts have fixed a 48-hour week and prohibit the working of women at night. The laws of the rest of the New England States have established a 54-hour week. Attempts are being made in some other States in New England to reduce the hours to 48.

The legal working hours in the southern States for one shift vary from 54 to 66, but there is a general understanding and custom of running 55 hours a week for one shift. Many mills are run with two shifts, 110 hours a week.

The effect of these laws and customs of operation is that the full legal running time in Massachusetts is about 200 hours a month. The actual hours run in the two sections were about as follows:

1922—North 170 hours, South 250, or 47% more than the North.
1923—North 180 hours, South 280, or 60% more than the North.
1924—North 137 hours, South 246, or 80% more than the North.
1925—North 144 hours, South 264, or 85% more than the North.

Consumption of Cotton in Bales

Table 2 shows the number of running bales of cotton used per year by the mills of the country since 1900.

In 1922 the northern mills used 2,570,000 bales of cotton and the southern mills 3,978,000, or a ratio of 1 to 1.46.

In 1923 these figures were: North, 2,822,000; and South, 4,489,000; or 1 to 1.59.

In 1924, they were: North, 2,165,000; South, 4,050,000; or 1 to 1.87.

In 1925 they were: North, 2,392; South, 4,460,000; or 1 to 1.87.

A portion of the smaller consumption of the northern mills is due to the finer average size of yarn made in the North.

The above shows that the South has the bulk of the business so far as pounds go, and the result of all the factors is that when the country is not consuming the product of all the mills at full capacity the South will get what is termed in power-plant parlance "the base or steady load," and the North will get the "peaks." Every one knows that periodical and peak loads are not profitable ones to carry.

Wages and Efficiency of Operatives

The most important element in any manufacturing enterprise which requires a considerable amount of labor in proportion to the other factors, is that there shall be an abundant supply of intelligent people who are willing to work for a reasonable return, and who will be reasonably contented.

TABLE 1.—ACTIVE SPINNING SPINDLES IN THE UNITED STATES—1900–1925
(Figures to nearest 100,000)

Year	Non-cotton growing states	Cotton-growing states	Total
1900	15,100,000	4,400,000	19,500,000
1905	16,000,000	7,600,000	23,700,000
1910	17,800,000	10,500,000	28,300,000
1915	19,000,000	13,000,000	32,000,000
1920	20,300,000	15,200,000	35,500,000
1921	20,300,000	15,700,000	36,000,000
1922	19,800,000	15,900,000	35,700,000
1923	20,000,000	16,300,000	36,300,000
1924	18,900,000	16,900,000	35,800,000
1925	17,700,000	17,300,000	35,000,000

TABLE 2.—COTTON CONSUMED IN THE UNITED STATES—1900–1925
(Running bales used per year by mills—to nearest 1000 bales.)

Year	Non-cotton-growing states	Cotton-growing states	Total
1900	2,350,000	1,523,000	3,873,000
1905	2,139,000	2,140,000	4,279,000
1910	2,507,000	2,292,000	4,799,000
1915	2,816,000	3,193,000	6,009,000
1920	3,048,000	3,714,000	6,762,000
1921	2,257,000	3,152,000	5,409,000
1922	2,571,000	3,978,000	6,549,000
1923	2,823,000	4,489,000	7,312,000
1924	2,166,000	4,051,000	6,217,000
1925	2,392,000	4,460,000	6,852,000

This is a condition which now prevails in the South.

The wage scales in the southern States vary from 25 to 40% less than in the North, the larger difference being further South.

Colored help are used in the South only in the picker room, boiler house, and dychouse, where they are separated from the whites.

In the North, some of the mills in the country towns still have a considerable proportion of their help who speak English, but the great majority of the operatives are foreigners, or of foreign descent, and do not speak our language. Much good work is being done in their Americanization and in teaching them the language.

The Supply of Operatives

There is an ample potential supply of operatives, outside of the Carolinas, to run as many more spindles as there are now in the South. All that is necessary to obtain them is to build mills, with their villages in most cases. At the higher elevations the climate is almost ideal.

Climate, however, is a thing which we talk about a good deal. Each community seems to like its own climate as much as we do our New England climate.

About twice as many spindles could be run as now, without importing foreign labor, omitting Mississippi, Kentucky, Louisiana, and Texas.

The people of Tennessee and Texas are particularly active in trying to locate mills in their States. At two spindles per operative they would support several million spindles.

Massachusetts has about 12,000,000 spindles in place and a population of 3,852,356 in 1920, or a little over three spindles per person, or about the same as South Carolina.

Kinds of Goods Manufactured

The woven goods made in this country amounted to approximately 6⅓ billion sq. yds. in 1919, 6¾ billion in 1921, and 8¼ billion in 1923.

The sales yarns made were 618 million lbs. in 1919, 484 million in 1921, and 620 million in 1923.

Nearly all of the mills of the South are making medium or coarse goods and yarns, and only about 10% of their product might be designated as fine goods. In the North a greater proportion, probably one-third, of the product is fine goods.

In the year 1923 the southern mills made about two-thirds of all the medium- and coarse-goods cloths and nearly three-quarters of all the pounds of sales yarn.

Cost of Manufacturing

In order to make an approximate estimate of the difference in cost of manufacturing North and South, we have assumed the reproduction cost of a medium-goods mill in the North to be $50 per spindle, and in the South $45 per spindle, and that the cost per year of the product of a spindle for the northern mill would be $40.

We have also assumed that the management is equally good North and South.

Table 3 shows the cost for the northern mill running 48 hours per week and a southern mill 55 hours. This table shows that of the total difference of $6.73 per spindle per year, $4.53, or two-thirds of it, is in the single item of labor.

Table 3.—Comparison of Cost of Manufacturing North and South

		Mass. mill on 48-hr. week		Southern mill on 55-hr. week		
		Per cent of total	Cost	Per cent saving	Cost	Saving in dollars
1	Materials, including transportation of raw and finished goods	45	$18.00	2	$17.64	$0.36
2	Labor for mill	34	13.60	33	9.07	4.53
3	Power	5	2.00	33	1.33	0.67
4	Supplies	2	0.80	0	0.80	0.00
5	Fixed charges:					
		Per cent				
	a Average depreciation	3.1	1.24	10	1.12	0.12
	b Taxes	2.0	0.80	33	0.77	0.03
	c All insurance	0.6	0.24	0	0.24	0.00
	d Repairs and maintenance	2.8	1.00	25	0.75	0.25
	e Administration and sales	5.8	2.32	0	2.32	0.00
	f Total fixed charges	14.0	5.60		5.20	....
	Total	100	$40.00		$34.04	$5.96
	g Saving in fixed charges due to running 55 hr. instead of 48 hr			14	—0.77	+0.77
	Comparable southern mill, cost and saving				$33.27	$6.73

$6.73 ÷ $40 = 16.8 per cent less cost in South than in North.

Effect of Mill Village

This difference in favor of the southern mill is usually reduced somewhat if it maintains a larger mill village than the northern mill, the average for a full village as against no village being about 5% on the cost of the goods. As against a Massachusetts mill which maintained a portion of a village, the saving of the southern mill might be reduced by about 2% on the cost of the goods.

Net Difference

It will be conservative to say that there is a difference of at least 14%, or $5.60 less cost for the product of each spindle in favor of the southern mill.

Other Conditions

Depression in the cotton textile industry has not been confined to this country. It has been disastrous in England, due principally to the fact that her colonies have not been buying. They also made a mistake in increasing the capitalization of their mills when the industry was booming.

In this country, losses have not been confined to the North, but the losses in the South have been nowhere as severe.

Some of the chief reasons for the general financial depression in the industry have been the high prices and large variation in price of cotton, the increase in imports of cotton cloths, and the fact that increase in exports has not kept pace with the increase in spindles in this country. Probably the greatest reason is that the increase in spindles coupled with the practice of running mills more than one shift, which is particularly prevalent in the South, has caused the production to increase faster than the demands of the market.

Increase of Spindles and Population

From 1900 to 1925 the population of the United States, based on the estimates of the Bureau of the Census, increased about 50%. During the same period, the active spindles in the country increased about 85%.

The number of active spindles has held practically constant since 1920. During this period many new mills have been built, but the effect seems to have been that old spindles became inactive as new ones were added.

In July, 1921, the Bureau of the Census started collecting data each month as to the number of spindle-hours run by the mills of the country. For the year 1921-1922 the figure was about 89 billion, for 1922-1923, when the industry had a period of prosperity, it was 102 billion. For 1923-1924 it was 84, and 1924-1925, 91 billion. Based on eleven months' figures, it will be something over 86 billion for the year ending July 31, 1926. This is shown in Table 4.

Table 4.—Increase in Population and in Number of Active Spindles Since 1900

Year	Active spindles	Population	Spindle-hours
1900	19,500,000	76,000,000	.....
1905	23,700,000	.....	.....
1910	28,300,000	92,000,000	.....
1915	32,000,000	.....	.....
1920	35,500,000	106,400,000	.....
1921	36,000,000	107,800,000	.....
1922	35,700,000	109,200,000	89,308,000,000
1923	36,300,000	110,700,000	101,931,000,000
1924	35,800,000	112,100,000	84,359,000,000
1925	35,000,000	113,500,000	91,054,000,000
1926	.....	.....	*86,151,000,000

* One month estimated.

The apparent lesson to draw from this chart is that under recent conditions of marketing in this country, and considering imports and exports, we have more manufacturing capacity than can be kept busy all the time. The greatest factor which brings this about is that during the war years many mills operated two shifts where formerly nearly all the mills ran only one shift. Since the war some northern mills and many southern mills have continued to operate two shifts, and this has greatly increased the production capacity.

The productive capacity is now so far in excess of the market demand that there is little profit in the business for anybody.

What Is the Remedy?

Before any remedy can be applied, the facts must be faced and acknowledged.

The aspects of the problem may be different from the standpoints of the northern and the southern mills, but much more progress can be made by cooperation than by each section going along independent of the other until they meet in competition in a glutted market. Neither section can solve this problem alone.

The primary trouble with the cotton mills at present is that production is too large and the price of their products is too low.

From the standpoint of the industry as a whole, some steps should be taken to get prices on a profitable basis and keep them there. A program of curtailment would seem to be the immediate method of bringing this about. Such a program should be based on a careful study to establish what the requirements really are. Curtailment, however, can be regarded as only an immediate move to correct the present market condition.

Beneficial work can doubtless be done toward causing an increase in the use of cotton goods and an increase in our exports, and perhaps a decrease in imports.

The consuming public is demanding more attractive and artistic goods. This demand must be met and is being developed.

The formation of The Cotton-Textile Institute, the membership of which consists of mills engaged in cotton manufacturing and the object of which is to promote the progress and development of the cotton industry in the United States, should be of great benefit to the industry through the collection of authentic data for the industry as a whole and by establishing a closer contact and cooperation between the various cotton-manufacturing organizations.

We shall not attempt to enumerate possible methods the use of which might tend toward an adjustment. These will be brought out by the discussions of the Textile Institute better than we can state them.

Editors
Charles H. Clark Vernon E. Carroll
Clarence Hutton Douglas G. Woolf

EDITORIAL

We Believe
In the Conservation and Protection
of Domestic Industries

Governmental Hypocrisy

THERE will always be some question as to what might have been the extent of the decline in cotton futures if the report of September 16 had been accompanied by range, or maximum and minimum, crop estimates, but that the decline would have been much less than the 200 points already registered will be very generally agreed. Self-appointed friends of cotton growers, headed by Congressman Black of Texas, who were responsible for elimination of range estimates in the September 16 report, must also assume full responsibility for the result of their political interference.

These politicians are now busily engaged in drawing red herrings across their trail and are even going so far as to suggest elimination of all cotton crop estimates, but this should not divert attention from the fact that the real motive of these politicians in influencing the elimination of range forecasts was to oblige the crop reporting board to resume the hypocritical position of publishing unqualified forecasts. They also expected, of course, that the September 16 estimate would be no larger than that of the last previous semi-monthly report.

For the trade as a whole these southern politicians have served a good purpose in bringing into strong relief the fact that the law does not provide for range forecasts, that crop estimates of a date much earlier than October 1 can be little better than guesses and that the law as it is at present calls for drastic revision. Private agencies will always indulge in early estimating of the probable size of the crop, but their estimates are always accepted at their face value and are never regarded as anything more than guesses.

An unqualified Government guess provided for by law carries a Government stamp of authority and becomes a forecast despite the lack of reliable information upon which such an estimate may be based. The law as it stands and as it applies to early cotton crop forecasts enforces Governmental hypocrisy, or misrepresentation. Although the Government profits nothing by this juggling of the facts its action is as morally reprehensible as that of the man who obtains money under false pretences.

* * *

Separating Sheep from Goats

IF THE conference of dry cleaners and textile manufacturers in New York last week establishes nothing other than a principle recognizing the maintenance group and its problems, something has been gained. Perhaps by the cooperation of the textile manufacturers with the maintenance men it may be possible to separate the sheep from the goats; expose those stooping to the use of short-cut methods in finishing in order to meet a price and absolve those mills which maintain high standards and refuse to cater to the sweat-shop garment trade.

If the existing evil were confined to the low-price trade it would not be so menacing but, unfortunately, goods sized with paraffin and rubber creep into the stocks of stores where women pay a good price for assurance of integrity in the merchandise offered.

Probably the most effective weapon of reputable manufacturers against the unscrupulous is educating the stores and the public in turn in the service that various types of fabrics may be expected to render. The style demand, of course, is the root of the present evil but the public should be informed when it is buying style and nothing else and, alternatively, when and to what degree it may expect a garment to withstand service conditions.

That the dry cleaners are not exaggerating the embarrassing predicament in which they find themselves is borne out in the great number of garments forwarded by them to the Bureau of Standards for inspection or instructions on how to handle them. In numerous cases these garments have been ruined although proper cleansing methods were used. In a comparatively few instances the dry cleaner is at fault and is properly liable for the damage. The goods received at the Bureau may be regarded as a typical cross-section of the present situation in the dry cleaning business and it is not one to inspire confidence in the standards of practice in textile finishing.

THE TEXTILE TREND

Cotton Markets: Gray goods have reacted downward on the raw material decline but absence of second hand offerings suggests inherent stability. Finished goods show no reaction though buyers become cautious. Trade watching ginning figures. Cotton yarns drop recent advance and are back to August prices with talk of considerable offers of business at low prices.

Wool Goods: American Woolen Co. will open spring, 1927, women's wear on Oct. 5. General market firm with spot supplies in both men's wear and women's wear well cleaned up. Sellers here talk of price advance but regard it as untimely. Fair demand for worsted weaving and knitting yarns; prices unchanged with a firmer tendency.

Knit Goods Markets: Buyers speculating on effect of cotton decline on spring underwear prices. Sellers feel that concessions would not stimulate sales. Hosiery well sold and prompt deliveries are hard to get. Sweater mills find it difficult to catch up with orders.

Silk Markets: Active buying continues in most broadsilks, including crepe-de-chines, satins, flat crepes, radiums, etc. Manufacturers increase schedules in many cases. Private estimates of consumption figures for September place the total as high as 50,000 bales which, if it turns out to be the case, would constitute a new record.

Trained Salesmen Wanted

IN all divisions of the textile industry there is a feeling that one of the troubles incident to distribution is the fact that so generally goods are not properly represented. Salesmen do not receive the intensive training they used to get or that they get in certain other lines of industrial activity. The result is that many are mere order takers and lines do not receive the intelligent explanation to which they are entitled.

How few salesmen in any division of the textile markets are put through an exhaustive course of training such as is the case in a good many other lines? Possibly such procedure is not feasible in the case of small units and it may be argued that in selling organizations connected with commodities other than textiles it is only the large company that can afford the time and expense to train men for salesmen's positions. Everything is comparative in this world and yet we are of the opinion that selling organizations in the textile industry suffer by comparison with those other lines, size being equal.

Not only does the textile salesman need knowledge of the personnel of his trade and of their various requirements, but he should have a speaking acquaintance with the technique of his industry. How much closer can the salesman get to a buyer when he can advise him about the merits of the merchandise he is trying to sell in a way that will leave no doubt as to the understanding of his subject. This is particularly true of raw materials and yarns. The salesman who knows only his price list and whether the market is up or down on the day he visits the buyer is not likely to get half so far as one who can advise with his client as to the proper uses of his material or who can suggest new methods for utilizing the particular merchandise he has to offer. This man usually receives a cordial welcome for the buyer realizes he may learn something to his benefit, while the order taker is frequently given short shrift and listened to only when an interview cannot be avoided. In certain buying offices notices are posted that salesmen will be seen only on certain days of the week, but it is hard to conceive that a man who has information to give the seller or who can advise with him on developments for his product cannot get by such notices and receive an audience at any time he may desire.

It is perhaps not too much to say that one of the causes for the constant demand for new things in the textile markets is the inability of salesmen to explain the desirable features and characteristics of lines which have been in vogue. As an illustration, it is a peculiar fact in the men's wear field that buyers who have had success during a certain season with a particular cloth, duplicating heavily on it, the next season will have nothing to do with it. This course may be due in part to the desire to give their customers something about which they

know little or nothing and thus be able to quote what their trade regards as a reduction. But the demand for something new is also doubtless due in a measure to the fact that buyers have not been sold on the old construction; they have not had explained to them the intrinsic value or the particularly advantageous characteristics of the fabric on which they have been operating or they would not consent to change.

Demand today is for salesmen who can sell their product, not themselves. The day has passed for the hail-fellow-well-met type. With increasingly competitive conditions the buyer must know more and more of the technical details of products he buys and the salesman who appeals must meet him on a common ground of intelligence and knowledge. To illustrate from a different field. A western concern was in the market for an automobile truck. The choice had narrowed down to two makes. When the selection was finally made the buying company wrote an apology to the unsuccessful bidder for not taking the truck made by this concern, stating its salesman had made a great hit with them, but that the salesman for the other truck had so convincingly demonstrated its desirable qualities that in spite of his rather objectionable personality they were obliged to place the order with his company. More knowledge of lines and training to impart this knowledge inoffensively to the buyer are what is needed in practically every textile market.

Convention Open Forum

Cotton Manufacturers to Discuss High Draft and Rayon

BOSTON, Sept. 30.—Merchandizing and the future of rayon will be the chief topics of discussion at the open forum which will be a part of the programme of the 121st convention of the National Association of Cotton Manufacturers in the Copley-Plaza here, Oct. 13 and 14.

Henry C. Everett, Jr., treasurer of the Winnsboro Mills, Winnsboro, S. C.; will be chairman of the forum which will open at 2:30 o'clock, the afternoon of the second day of the annual meeting. The discussion of merchandizing will follow the addresses on style creation and application, during the afternoon of the first day and the style show on that evening. Problems now confronting the manufacturers in their efforts to obtain a larger and more profitable volume of business will be considered and there will be a free exchange of ideas as to the best methods to be adopted to meet present difficulties.

Long draft spinning which is one of the most vital questions now interesting the cotton manufacturers will be another of the subjects discussed. Long draft spinning offers the possibilities of lower production costs and for that reason is being given much attention by textile men. Several types of machinery for this system are on the market but most of them are declared to be of too recent origin to allow of time to decide definitely the full benefits of the system.

Many of the manufacturers are expected to talk on rayon. A number of them will undoubtedly voice their opinions as to the future of this textile fiber as there has been considerable comment in textile circles recently and much speculation as to whether the consumption of rayon is to continue to increase or not. Some cotton manufacturers have expressed the belief that the rayon industry will not make any substantial gains during the coming year while others are more optimistic. All agree, however, that it is a separate fiber in itself and will never take the place of either silk or cotton.

Increased Membership

With 84 new members enrolled and the total membership at more than 1,000, the association is now completing its most successful and active year. The association, which is the oldest trade organization in the country, is now the largest it has been in its history according to W. Irving Bullard, treasurer of the association and chairman of the committee which has been conducting a membership campaign in the New England States and New York. Mr. Bullard will present a report on the campaign at the first business session of the convention Wednesday afternoon, Oct. 13 at 2:30 o'clock.

MANCHESTER SPINNING CUT TO ONE WEEK IN THREE

Manchester, Eng., Sept. 29 (Special Cable to TEXTILE WORLD).—Spinning mills using American cotton will commence running one week in three from Monday next. This additional curtailment of production is necessary owing to coal situation. Yarn consumption has been adversely affected by weave shed shut downs. Since June American yarn production has not exceeded 50% capacity.

Device for Auto Owner May Prove New Cotton Use

An interesting automobile accessory has been patented by a cotton goods man and his enthusiasm in promoting its use is divided between his belief in the success of the article itself and the fact that it offers a new use for cotton.

A. H. Penfield, selling agent and cloth broker of 320 Broadway, New York, is the inventor and the device, trade marked as "Autoskiis," is a means for extricating a mired car where tire chains would be difficult to apply and doubtful of success. The article consists of a strip six feet long and 10 inches wide of plain woven duck doubled, with cleats of rope sewed into it every three inches or so. One end of this strip is provided with cotton rope wherewith it is tied to the forward side of the rear wheel and when the clutch is let in slowly, the strip is drawn under the wheel to the point where, acting somewhat on the principle of the caterpillar tractor, the wheel runs up the strip of cloth and thus out of the hole. The device is used in pairs so that in practice both rear wheels would be treated as above.

Mr. Penfield quotes most recent figures as placing the automobile registration in this country as 20,000,000 cars. Each set of Autoskiis uses 4 lbs. of cloth so if 10% of the field could be sold a new use for more than 8,000,000 lbs. of cotton would have been found. Mr. Penfield believes that The Cotton-Textile Institute which plans to interest itself in new uses for cotton, will be interested in his new device.

Statement by Secretary Jardine on Alleged Manipulations of Cotton Futures

WASHINGTON, D. C.—Secretary of Agriculture Jardine has received from members of Congress and other sources in the South complaints that future trading on certain of the cotton exchanges has been the subject of manipulation, to the detriment of the cotton grower. These complaints have been accompanied by requests that the secretary take some action to correct this condition.

In reply to these complaints Secretary Jardine stated that he was aware of the significance to cotton growers of the present price situation in the futures market and of the various allegations of manipulation which have been made from time to time. He stated that he had repeatedly condemned manipulation in the future markets for agricultural products. In the case of grain, Secretary Jardine, under the Grain Futures Act, has been able to deal effectively with situations somewhat comparable to that now alleged to exist in the cotton market.

The secretary expressed a desire to act energetically to the extent of his lawful powers to protect the interests of the cotton growers, and asked that the cotton statutes now administered by the Department of Agriculture be examined again for authority to inquire formally into the subject of the complaints. The secretary was advised, however, that manipulative operations in the cotton futures markets are matters over which the existing law gives the Department of Agriculture no control and concerning which he does not have the authority to acquire essential information or to deal with any situation disclosed. It was pointed out that additional legislative authority is necessary before any really effective investigation can be undertaken of conditions such as are alleged now to exist.

Committee D-13 to Meet in Cleveland Oct. 21-22

The regular fall meeting of Committee D-13 of the American Society for Testing Materials will be held in Cleveland, Ohio, on Oct. 21 and 22, with headquarters at Hotel Cleveland. Arrangements have been made with Hotel Cleveland for the meeting and the management suggests that on account of a convention being held in that city that week, members make reservations as early as possible.

A special committee on arrangements and entertainment has been appointed by Chairman W. F. Edwards. There will be an opportunity to visit some of the large manufacturing plants in Cleveland and Akron. This is the first meeting of the Committee to be held in the West and indications are that it will be exceptionally well attended.

Amoskeag Employes Ask 10% Raise

MANCHESTER, N. H.—The Amoskeag Workers' Congress of the Amoskeag Mfg. Co. has voted to ask the company for a 10% increase in wages, and declined to accept the proposal for a conference between a committee of employes and officials of the company. The suggested plan was to confer on the advisability of readjustment of the wage scale to permit acceptance of orders which are below the quoted price. The increase if granted would apply only to orders of this nature which are at present going to lower bidders.

TEXTILE CALENDAR

National Association of Cotton Manufacturers, Fall Convention, Copley-Plaza Hotel, Boston, Mass., Oct. 13-14, 1926.

Texas Textile Association, Annual Convention, Hotel Westbrook, Fort Worth, Texas, Oct. 15-16, 1926.

Associated Industries of Massachusetts, Annual Meeting, Copley Plaza and Westminster Hotels, Boston, Mass., Oct. 20-21, 1926.

Committee D-13 of American Society for Testing Materials, Fall Meeting, Hotel Cleveland, Cleveland, Ohio, Oct. 21-22, 1926.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Nov. 1-6, 1926.

Southern Textile Association, Fall Convention, Greenville, S. C., Nov. 5, 1926.

National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York, Dec. 6-11, 1926.

Second Southern Exposition, Madison Square Garden, New York City, Dec. 14-18, 1926.

Electrical Refrigeration in Textile Mills

Possible Application in Such Processes as Diazotization in Producing Insoluble Azo Colors, Weighting of Silk With Tin Salts, Mercerization of Cotton Cloth, Etc.—Continuous Cooling System Which Might be Used—Rate of Cooling in This System

By F. W. Sturtevant

SINCE mechanical refrigeration has proved so successful in application to drinking water cooling, and as a replacement for ice in the cooling chamber or "ice box" of the ordinary household refrigerator, it is only natural that investigation should be made relative to the possibility of using this means to attain low temperatures in the several cold processes in the treatment of textile materials. In the writer's opinion, there are several places in a mill where such a unit system as was described in the Sept. 4 issue of TEXTILE WORLD might be used.

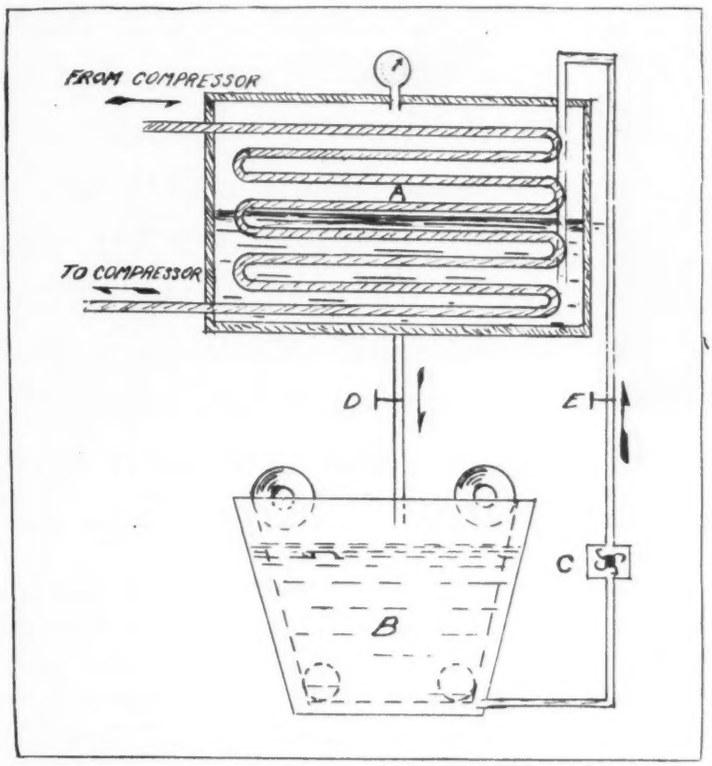
Ice Dilutes Baths

Most of the processes, such as diazotization, silk weighting, etc., carried out at lowered temperatures are rather delicate, and for this reason those in charge of such treatments regret the fact that constant additions of ice must be made. Such additions dilute the bath, which often will cause variations in effects obtained. Indeed, this impossibility of absolute control is sometimes wholly blamed for the poor quality of a finished product. If an electrical system were employed, the quality of production would be raised, the speed of production would be increased, and a saving above the expense of operating the system would be effected through the elimination of the cost of ice, while the cause of sloppy floors from melted ice would be eliminated. The original cost of the electrical unit may appear rather large, but after a rough calculation, it will be seen that when this cost is figured on a daily basis, the system will soon pay for itself.

The insoluble azo or ice colors are produced by resorting to diazotization. Diazotizing consists of treating certain chemical compounds with nitrous acid, which produces a chemical reaction and chemical change. Nitrous acid (HNO_2) will exist only at temperatures considerably lower than those of ordinary tap water, hence method of attaining and maintaining these temperatures must be used. Ice is the agent commonly used, but the necessity of making constant additions to the bath renders its use decidedly inconvenient. Direct cotton colors are often diazotized and developed on the cloth after dyeing, and here again the same inconvenience is encountered.

Diazotizing Done Cold

The diazotization is most frequently carried out in jiggers (for piece goods) and in closed circulating machines of the Franklin process type (for package dyeing of yarn). Yarn is also treated in skein dyeing machines or in a tub where the yarn is turned by hand. In all of these cases the temperature must be below 50 deg. F., and indeed, often it is advantageous to work at temperatures as low as 35 deg. F. Some idea of the amount of ice necessary to produce these temperatures may be gained when we consider that tap water will seldom, except on cold winter days, run in at less than 65 to 70 deg. F. Hence, it will be necessary to add a great amount of ice to bring any large quantity of water to a workable temperature. Of course the cooling power of ice depends upon the fact that it melts, absorbing heat from the medium surrounding it, and this takes considerable time.



Possible Means Whereby Unit Electrical Refrigeration System Might Be Used by Textile Mills

Let us see just how such treatments would lend themselves to the application of electrical cooling. Suppose that 100 gals. of liquor are required in a tub, tank, or jigger, at a temperature of 38 deg. F. The tap water temperature may be assumed as being 68 deg. F. To accomplish a cooling from 68 to 38 deg. F., 30 B.t.u. must be removed from each pound of water, hence 30 x 100 x 8.33=24,990 B.t.u. must be removed from the 100 gals. necessary for the process.

Capacities of Units

The small, easily installed mechanical refrigeration units vary in cooling capacities from about 1,000 to 4,500 B.t.u. per hour, according to size of coils, size of compressor, and horsepower of motor. One manufacturer has a ¾ h.p. system which will remove from the medium surrounding it 4,050 B.t.u. per hour. It would take 24,990 ÷ 4,050, or 6.17 hrs. to cool the 100 gals. to 38 deg. with this cooling plant.

In the present-day ice method, the liquor is made up cold, used in the jig or vat but a few minutes to actually accomplish diazotization, and then run off into the sewer. This diazotizing bath loses but little of its nitrous acid while acting for such a short time in the cold. However, if the liquor is allowed to come to room temperature and is left exposed to the air, it soon loses its value as a diazotizing agent.

Insulated Storage Tank

If 200 gals. of liquor are made up, instead of the 100 gals. which are necessary in the process, 12.38 hrs. will be required to attain the necessary temperature. To contain 200 gals. of liquid and the cooling coil, a tank of about 36 cu. ft. capacity would be needed. A compact tank for this purpose might measure 4 ft. by 3 ft. by 3 ft. This tank should be insulated on the outside with regular 3 in. cork block. The surface area would be 66 sq. ft. and since the heat transmission of a 3-in. thickness of cork is 2.5 B.t.u. per square foot per degree difference in temperature between the air outside and the liquid inside the box over a period of 24 hrs., there would be 165 B.t.u. lost for each degree difference between the outside and inside temperatures each day. Suppose the outside temperature is 85 deg F., and, since the liquor is at 38 deg. F., there would be lost 165 x (85 — 38)=7760 B.t.u. This would require operation of the machine for 7760 ÷ 4050=1.92 hrs. in addition to the actual cooling time, or 14.3 hrs. to cool the 200 gals. To keep this water cool would require but a few minutes running each hour.

Liquor Under Slight Pressure

This tank A may now be connected to the vat or machine B, where the process is carried out, as is shown in Fig. 1. The liquor may be kept under slight pressure while in the storage tank by means of circulation pump C. When diazotization is to begin, valve D is opened and sufficient liquor drawn from tank A to accomplish the desired action. The cloth is then started through the liquor and the pump set in motion. The compressor of the cooling system should also be started at this time. In this manner, the few degrees heating of the bath by the cloth and by the air while the bath is in the open vessel is kept at a minimum.

When the diazotization is complete, the valve D is closed and the pump is allowed to run until the bath is all forced back into the tank A, after which valve E is closed. Any heating up of the bath is offset by running the compressor part of the time when the bath is not being used.

The use of a 200-gal. tank is advisable, even though only 100 gals. of liquor are needed, since with the circulation of the former amount by the pump, there will be very little heating up during the process, and what heating does take place will be very gradual.

Of course the bath will become weakened after a time and additions of chemicals will be required to maintain the concentration. Such additions may be made to the liquor in the jig or tank and a few minutes running of the circulation pump will insure thorough mixing.

Use Acid-Proof Tank

Where such acids as hydrochloric and nitrous are present, the possibility of the formation of compounds which might cause precipitation in the bath must be carefully watched for. Hence, it is often necessary to use tanks and vats of some acid-resisting substance, such as lead or monel metal,

45 "SEQUENCE CALLS" $82,500

WORTH OF BONDS

IN BRINGING out a new bond issue, a Cleveland financial house regularly files with the long distance operators from 50 to 100 sequence calls to banks and investment firms in other cities. The calls come in in one-two-three order. As one is finished another is put up, so that a greater number of calls can be completed within a given time. For one such issue, 47 calls were filed . . . 45 were completed. Charges, $40 . . . sales, $82,500.

"SEQUENCE lists" are another convenience worked out to increase the effectiveness of long distance campaigns and to save the time of the telephone user. Many who formerly used the telephone only locally are now using it to distant states and towns. Many who used only single calls are now taking advantage of the sequence method. Concerns that at first used long distance calls only when an emergency arose, now depend on them to make appointments, to save long and tiresome trips, to make sales where interviews have been denied, and to make purchases where both time and price are important.

Would it not be worth while to make a thorough check up of your various departments and executives to see if the telephone is bringing its full resources to bear upon your business? Each working day sees another million dollars invested in the communication equipment of the Bell System. Does your business secure its share of the added advantages of these developments? The telephone resources of any business are worthy of careful study. Firms are frequently amazed to discover their unthought-of possibilities.

A Commercial Department representative will gladly call to explain the use of sequence lists and consult with you concerning what Long Distance can do for your business.

And now, what distant company or executive would it be to your advantage to call? The buyers of seventy thousand communities are within your easy reach. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

or vats lined with such substances. In this manner, it is possible to avoid any chance of producing uneven, streaky, or shaded goods, and at the same time to be sure that rapid deterioration of the machinery used will not occur.

This brings to mind a case where a copper kettle was used for a diazotizing bath. The bath was made up carefully and the dyed cloth was run in it for the necessary length of time. Development was carried out in the same kettle after the diazo bath had been run out and the kettle washed well. A very beautiful result was obtained on the finished piece, but it was not at all what was expected. So, if surprises (and often consternation) are not desired, it is well to avoid the use of copper anywhere in the system. Coils for the cooling element may be obtained in lead or some other acid-proof metal or alloy.

Another process where an electrical unit might be used with good results is in the dynamite process of silk weighting. Tin salts are used here and a low temperature must be maintained in order that the best results may be secured. Ice is used at present, but here again the constantly increasing dilution of the bath makes results uncertain and makes it necessary that the bath be soon replaced.

Coil in Process Tub

The same system as is described above might be used here, but if for any reason this is impractical, the cooling coil might be installed in the bottom of the process tub. It would be out of the way of the cloth or yarn being processed and the water would be moved sufficiently by the goods being turned to cause a circulation of the liquor and prevent mere local cooling.

In the mercerization of cotton cloth, there is an appreciable amount of heat evolved, since the cloth is generally wet out just previous to entering the strong caustic bath in the tightly stretched form. This water in the cloth combines with the caustic soda and a rise in temperature is caused by the heat of formation of the two. Such heating up of the alkali bath produces various degrees of mercerization which are directly proportional to the temperature rise.

Ice has been added directly to the bath but with very little success, since the cause of heating is merely aggravated. Some plants have a system where the solution runs through a series of pipes over which cold water runs constantly. In other mills, this is reversed and the solution runs over a series of cold pipes. The electrical cooling unit might be used in place of the water containing pipes; or the closed system described above might be used. In any case, the maintenance of a set temperature would tend to eliminate the variations in mercerizations and give a more uniform product.

Keep Pastes Cool

So far, only liquid processes have been considered in this discussion. There are many places where semi-solids or pastes are used to produce various effects on textile materials. Printing, for instance, is accomplished by using dyestuff and dyeing assistants held in a boiled starch or gum paste. If these thickener pastes (corn starch, wheat starch, gum tragacanth, gum arabic, etc.) are allowed to stand for any great length of time exposed to the usual warm air of the color-mixing room, they will sour, due to the activity of bacteria. This action is retarded greatly by low temperatures.

The accepted procedure followed when making up pastes is to boil-up only enough thickener to last for a short time—say a day. After the paste has been used a day in the printing machine, any left over is thrown out. It would perhaps prove worthwhile financially to have a storage room in which the temperature is maintained at around 40 deg. F., where the pastes could be left over night or even for periods of several days with no fear of their spoiling.

The production of rayon, especially viscose, is greatly dependent upon temperature. Lack of absolute control of this factor often causes the viscose "dope" to be entirely unfit for the purpose for which it was intended. This may seem a bit outside the scope of the true textile mill, but, when the advances which have been made in the use of this compound as a textile filler and finish are considered, it seems probable that viscose before long will have its place in the finishing room.

Since cold retards the ripening of the viscose "dope" it seems feasible enough to assume that a "cold-room" will be a necessary part of the mill applying viscose to produce finishes. Through thoughtful expose of the ripening viscose prepare in this room, the time at which it will be ready for use may be carefully predetermined, and in case anything makes it seem advisable to hold up the production of a batch, it may simply be placed in the refrigerated room or cabinet.

Driving Knitting Machinery

Shafting Difficulties—Ball and Roller Bearings—Advantages of Continuous Operation—Misalignment of Automatic Hosiery

By William Davis

THE average hosiery manufacturing business consists of a large number of small units of machinery and equipment in which correct alignment and true adjustment are vital to the perfection of the texture produced. Automatic hose machines are lightly constructed and made to stand on three or four legs, and it often happens that the machines have to be installed in rooms with badly worn floors, which makes the alignment of the machine a difficult matter. In many cases one finds a brave attempt to remedy matters by the pushing in of bits of paper, or cardboard, which in turn become compressed into small bulk or are knocked away from the member which they are supporting.

In some instances it is found that in pulling the machine from one position to another one of the leg supports has been rendered loose, and this gives rise to unsteady poise. One is sometimes at a loss to explain why an article of hose displays smaller loops on one-half of the circle than on the other, and examination reveals that this is generally due to faulty alignment of the needle cylinder, one of the supports on which it stands being lower or higher than the others. A small discrepancy is sufficient to explain the defect referred to.

Shafting Difficulties

The countershafts found in connection with the driving of hose machines and circular web machines also require periodic attention, as it is found that in time these tend to work slack, thus causing vibration to be set up. This shaking may have little effect in machines of coarse gauge, but in fine gauges it is serious and gives rise to irregularity of loop. Brackets holding floor shafting are very common offenders in this respect, due to the manner in which they are bolted down. These should be screwed into the floor where a strong thick beam is directly underneath to act as a support; but this is not always possible, and the floor brackets supporting the shafting have often to be screwed into a plank which is not more than half an inch thick. The strain on the shaft quickly causes the bolt opening to enlarge, and the bearing to become slack. Swaying of the shafting and its pulleys connecting up a seamless hose machine causes vibration which is detrimental to the quality of the work.

The floor shafting is most suitable where it can be arranged; but there are machines which cannot be conveniently driven in this manner, particularly those which require the use of a large pulley. Where pulleys on a floor shaft exceed about 20 in. in diameter, it is found that they cause a great drag and soon work loose. For the driving of the larger types such as web machines and Cotton's patents, the connection is usually made with an overhead shaft, running in the region of 100 r.p.m.

There is now a movement in favor of the individual drive for large width machines, as this obviates all belting and makes the knitting room quite clear of obstruction. These drives are arranged with individual motors attached at the side. The frame is gradually started and can be as effectively stopped. In this way, if it is desired to run any particular machine overtime it can be done without having all the shafting of the room in action.

Three-Shift System

There has been recently an extension of the shift system in many hosiery mills, where machines are run continuously for 24 hours per day in three shifts of 8 hours each. This has been found to be an advantage in fine gauge machines in particular, for the rooms are then kept at an even temperature throughout. Over the week-end, the delicate metal parts, such as the sinkers and needles, are kept at proper temper and do not exhibit those expanding and contracting propensities which are associated with rise and fall of temperature. This has a further effect in controlling the moisture in the room; for, when the room gets cold, it allows moisture to collect quickly and concentrate on the needle parts to cause rust. Continuous work also keeps a fine film of oil intact on the needles, and this contributes much towards sweet working of the yarn. When the film becomes dried or stiff, difficulties arise in working until the parts again become "warmed up" to the work.

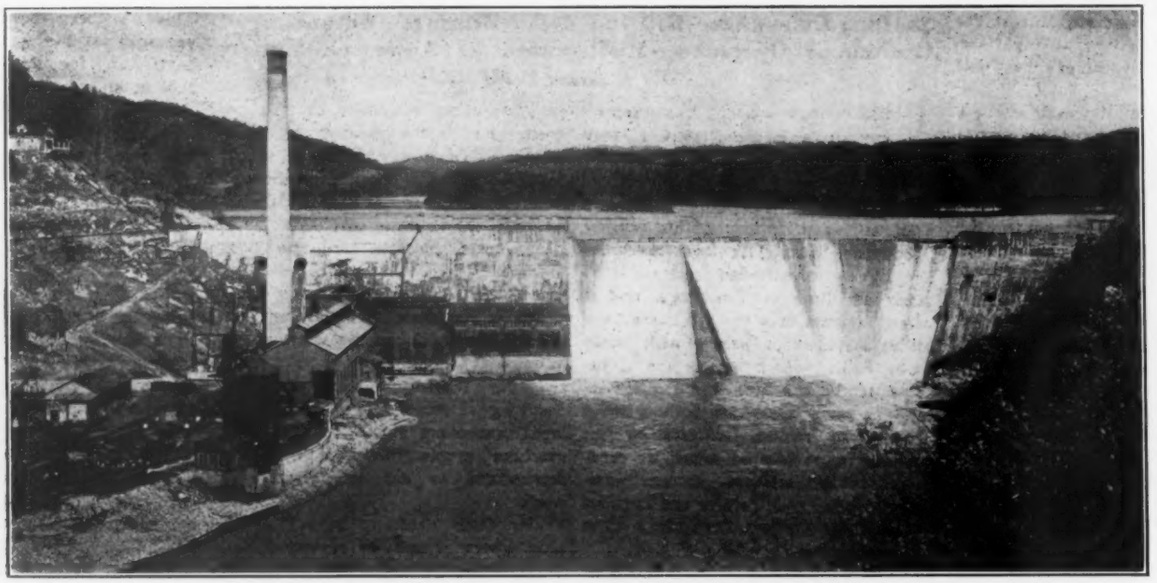
Another advantage of the continuous shifts is that considerable waste is saved, in certain classes of trade. It was found that when certain machines had a quiet period of about 30 hours over the week-end, the sinker parts had changed their dimensions slightly and sufficient to cause considerable numbers of holes and ladders to appear in the goods. This condition persisted for several hours after starting up.

Ball and Roller Bearings

It should not be necessary to refer to the undoubted advantages of ball and roller bearings in hosiery machine shafting, but even today there are many firms who cavil at the extra initial outlay which this involves. The cost of a plain bearing is about one-third the cost of a similar self-aligning ball bearing.

It is a common experience for the oil cups which lubricate such a bearing to leak, causing unsightly stains on the floor which detract very much from the clean appearance of the work room. The frequent attention which these require in refilling gives an opportunity for slackness, and it is frequently necessary to call sudden attention to an overheated bearing or even to cases of fire. Then, when the ordinary fixed bearing has been fitted for some time, the supports tend to move slightly out of position, which throws the shafting out of alignment. In the fixed bearing, this gives rise to heat and friction, while the ball bearing which is made self-aligning is free from such danger, as it can right itself within certain limits with changing position of the bearing support. Free oil dripping from cups overhead is a fruitful source of troublesome stains in knitted goods, as the oil is often found with mineral substances which give rise to serious faults in finishing.

PHILADELPHIA, PA. Wm. Spink Co., Nixon above Umbria Sts., Manayunk, worked wools, carbonizers, etc., and spinners of velvet and axminster yarns, has awarded contract for alterations to be made to their mill buildings.



Combination Hydro-Electric and Steam Reserve Plants of The Tenessee Electric Power Company on the Ocoee River in East Tennessee

There's Plenty of Hydro-electric Power Available in Tennessee

Power to turn the wheels of industry is available in ample quantities in Tennessee.

Textile manufacturers locating in this section are not confronted with the problem of investing thousands of dollars in power plant equipment. Hydro-electric power is at their beck and call, thereby releasing new capital for the installation of facilities for increased production.

Electric power in Tennessee has proved its advantages in every line of industry. It can be purchased for less than the individual manufacturer can make it. And the service is adequate, dependable and thoroughly reliable.

The illustration shows only one of the power plants in The Tennessee Electric Power Company's system. The combined rating of the company's present steam and water power stations is 269,700 horsepower, with applications pending before the Federal Power Commission for the further development of 592,500 horsepower in the upper Tennessee River basin—aside from Muscle Shoals.

With resources like these and its interconnections with other power companies of the Southeast, The Tennessee Electric Power Company is in position to guarantee ample and continuous power service to new industries locating in its territory. Textile executives interested in southern locations are invited to write us for complete information about Tennessee.

Announcing Our New Industrial Department

The Tennessee Electric Power Company has recently established an industrial bureau for the specific purpose of furnishing manufacturers and executives interested in southern locations with detailed information about labor, fuel, power, transportation facilities, plant sites, banking accommodations and other pertinent data of Tennessee.

The new department with headquarters at Chattanooga is in charge of R. C. Leonard, a native Tennessean, who has had ten years' experience in industrial engineering work, embracing practically every type of manufacturing enterprise in the state. Much of Mr. Leonard's time will be spent in northern and eastern centers on which occasions he will be available for personal consultation with executives interested. Requests for information should be addressed to the company at Chattanooga.

The Tennessee Electric Power Co., Chattanooga, Tenn.

Build Your Mill in TENNESSEE

Colors Hold Key to Style Future

Individual Choice in Women's Wear To Be Stronger Than Ever Next Spring—Cotton Dress Goods in Line to Benefit From Much Broader Distribution—In Silks Solid Colors Should Have New Importance—Sheer Worsteds Indicated for Women's Wear—Light Colors Again in Spring Men's Wear

THE colors for the spring season of next year are to be largely of an individual nature, that is to say, each person may choose her own color and be in good form. Grounds for this statement are presented in the color movement that appeared during the spring races in France.

Colors for Spring of 1927

Over in the paddock, where the nobility paid the highest price for entrance, pastel colors held sway. This is taken to mean that such a presentation of colors will be accepted to some extent in this country when the next spring and summer seasons arrive.

It is only fair to say that in the grounds where the entrance fee was placed at a popular price more shades of various colors were worn than at any similar outing in the history of the French republic.

To the foregoing it may be added that competent observers in attendance at the spring racing meets in France stated that plain colors held first place among the well dressed in the proportion of two to one as compared with prints. This statement refers to new dresses and costumes and not to those made up from fabrics developed early in the season.

With a view to determining the position of colors in this country the writer made several observations in important fashion centers. From such investigation it was found that plain colors have made a distinct gain. Not only was this true at seaside resorts frequented by the rich, but the same obtained among well dressed young business women employed in New York City.

With such a large movement of solid colors indicated, it is somewhat difficult to describe the indefinite colors that are strongly indicated for general consumption. It may be said, however, that the rather homely description of "Washed-out colors" of every sort are to be included in the pastel series.

A few examples are presented. In reds a half dozen shades of raspberry are one indication. In blues as many shades from sky to navy are certain to hold a prominent place.

Lavender blues in variety made a distinct gain in both Europe and America in all centers frequented by the exclusives and are certain to extend their horizon during the spring and summer of next year.

Blues are now so highly regarded for next year that colorists who made an intensive study of color developments are advocating shades of blue, pivoting on midnight blues, to be worn in the form of foot wear.

Referring again to reds it is to be noted that various shades of pink drawn from fruits, flowers and shells are to be top liners with both the exclusives and the masses. This for the reason that pinks are familiar colors and good examples of pastels.

At a gathering of the wives and daughters of American millionaires whose dresses and costumes were made recently, pinks represented 90% of the colors worn with the remaining 10% apportioned to mother of pearl gray.

Grays enjoy the advantage not only of being a spring color but in addition various shades of gray are being sponsored by makers of model garments in the French capital. This is judged to be a favorable introduction of grays in the light soft tones for the coming spring and summer seasons.

Greens of the soft variety familiar as mignonnette and reseda, are indicated for some recognition along with other shades broadly classed as pastels.

Of course in a large movement of solid colors many variants of the foregoing basic colors will have a certain amount of recognition. For example, green blues, blue greens, purple reds, give indication of what is classed as broken colors, that is to say touches of various colors combined in one.

Blacks Prominent in Fall Wear

When the current fall season opened in the primary market last spring a wide range of colors rather strong in chromo were advocated by all authorities preparing color cards for general distribution.

As the season advanced, however, colors strong in chromo began to give way to a rising tide of softer colors of which woodland tans and autumn leaf browns are good examples and are now generally advocated together with pinkish reds and jungle greens.

Nevertheless black overshadows all other colors in the proportion of twenty to one, and unless all signs fail and all prophets are misguided in their observations, there will be no change during the coming fall and winter seasons.

Summed up in a phrase, anybody can wear any color that is smart and becoming and be in fashion.

It is only fair to say that insofar as accessories are concerned more scope may be apportioned to strong colors. In a comparatively limited way shades of nasturtium will have some recognition as wraps for theatre and opera wear.

Cotton Dress Goods in Line for Improvement

At least three major and as many minor new developments combine in aiding cotton dress goods to regain their former prosperity. After a long period of the policy known as "every man for himself," the leaders have joined forces to meet on common ground with a view to keeping production within reasonable bounds. This is not a gesture to calm fears and to stimulate confidence, but is a sincere effort to restore the cotton goods industry to a more profitable level. The second major development is the increased attention given to "styling." With a view to more artistic patterns reflecting style tendencies in circles where fashions take their rise and are furthered, manufacturers who have heretofore relied on selling agents to guide them in preparing collections are now styling their production. To meet with the highest possible level of success competent stylers with vision, experience and a

Textile World Analyst

This instalment Prepared Especially for TEXTILE WORLD by Eugene Franklin Peirce, of Editorial Staff of *Dry Goods Economist.*

NOTE.—Once each quarter the Analyst appears in the form of a style forecast of fabrics. All other weekly issues will continue to consist of analysis and forecast of conditions in the textile industry, prepared, as hitherto, by Dr. Lewis H. Haney, Director of New York University Business Research Bureau.

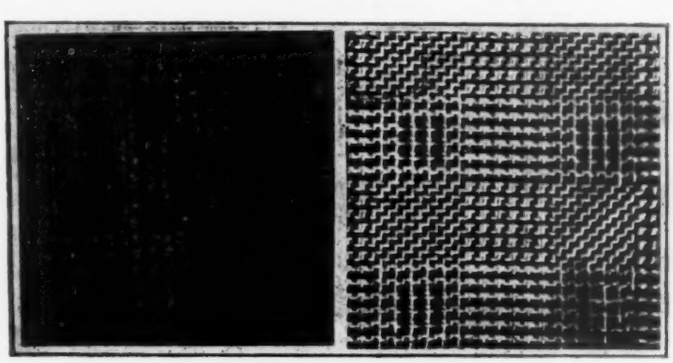
SUMMARY—STYLE FORECAST

1. Colors for spring remain an individual choice out of a large collection of authorized shades. Pastels are prominent.

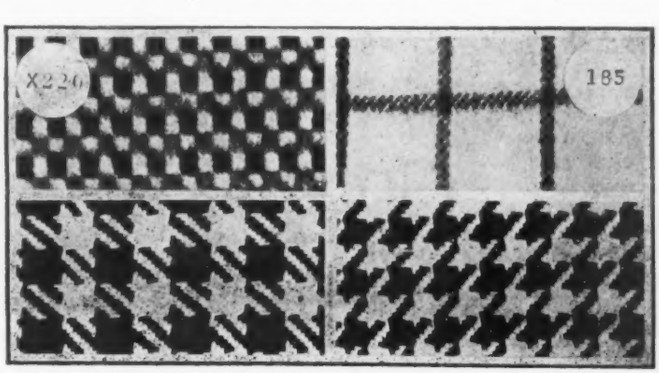
2. Fashion promises hopeful future for cotton dress goods. Combinations with rayon and even metal yarns take on prominence.

3. Solid colors probably more important for next year in silks.

4. Careful styling needed in men's and women's wear wool goods.

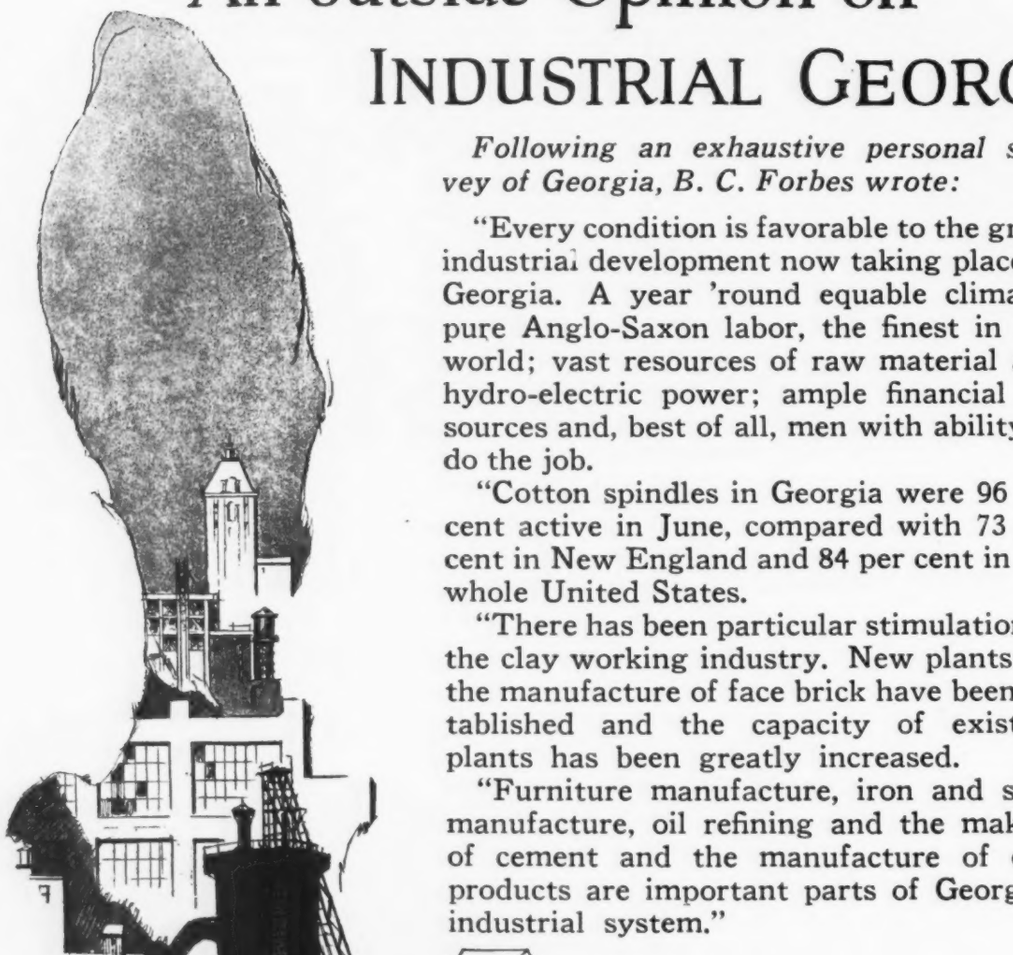


Suggested Plaid Treatments



Group of Woven Patterns

An outside Opinion on INDUSTRIAL GEORGIA



Following an exhaustive personal survey of Georgia, B. C. Forbes wrote:

"Every condition is favorable to the great industrial development now taking place in Georgia. A year 'round equable climate; pure Anglo-Saxon labor, the finest in the world; vast resources of raw material and hydro-electric power; ample financial resources and, best of all, men with ability to do the job.

"Cotton spindles in Georgia were 96 per cent active in June, compared with 73 per cent in New England and 84 per cent in the whole United States.

"There has been particular stimulation of the clay working industry. New plants for the manufacture of face brick have been established and the capacity of existing plants has been greatly increased.

"Furniture manufacture, iron and steel manufacture, oil refining and the making of cement and the manufacture of clay products are important parts of Georgia's industrial system."

New York Office
120 Broadway

GEORGIA RAILWAY AND POWER CO.
ATLANTA

sense of color harmony, have been employed to select patterns and to assemble chosen colors. To this may be added the steadily growing tendency on the part of producers to improve the quality of dyes to the best possible standard consistent with the price named for the merchandise.

The third major development in the industry of cotton dress goods is the attention given to lightening the weights in other than staples and to materially increasing the variety of weaves. Manufacturers formerly featuring heavy weights principally are now expanding in the direction of tissues—somewhat allied to weaves successfully produced in France and in Switzerland.

A surprising turn is the successful development of threads of metal used to beautify and to illuminate cotton dress goods in approximately the same manner as they embellish the highest priced silk novelties woven abroad.

Still more encouraging than all of the foregoing is an indicated renaissance of staples, long known for merit, which are to be accorded a place in volume selling.

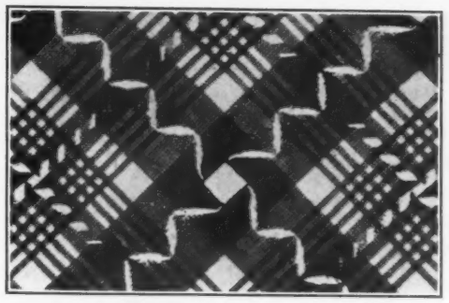
Suggestions for Worsted Dress Goods

Weaves, weights, finish and patterns are still the unsolved problems of the worsted dress goods industry. We think the solution of these problems may be about as follows:

Weights must be light if any headway is to be made in the partial displacement of silks. Worsted sheen twill now selling at comparatively profitless figures must make room for fancy or grouped twills under new colors, names and constructions.

Voile yarns point the way to light weight fabrics. Reps in variety provide for a pleasing change from the omnipresent sheen twills because they may still be made and sold at a profit.

Flat weaves in fancy colored yarns ought to make some headway in fabrics for sports wear, especially if they are developed in colors and constructions now meeting popularity in knitted fabrics.



A Clever Plaid Variation

As for designs, checks and neat effects are indicated to displace the large ombre plaids now having a vogue. Neat patterns are exploited in colors presented in French magazines and are a logical sequence to large plaids.

More Solid Colors in Silks

In the market for silks preparations for spring are of a conservative nature as compared with the intensive activity of a year ago. At that time stylers and art directors were unanimous in the opinion that any one could get rich in the distribution of printed silks since there would be no limit to the demand.

This year, however, conservatism attends the preparation of designs for printing purposes. Medium and rather small effects are highly regarded by the best observers who carefully studied styles at the spring racing meets abroad.

The principal change in silk styles for spring will be less prints, and more solid colors since the fashion movement is in that direction. Authorities are agreed on this subject for the reason that the printing of silks was overdone last season.

Tub silks are strongly indicated for a substantial gain next year. They are closing the present year as high favorites which leads to the belief that from now on washable silks in variety are certain to make a substantial gain in popularity. They are a pleasing change from prints, require little if any ironing, are cool and light in weight—all of which make an appeal to women seeking a silk for informal wear.

Colors for Men's Wear are Important

In the men's wear field more attention is being given to colors and to finish than formerly, and changes in collections are frequent. Importers are visiting English manufacturers with a view to "pepping" up the designers, finishers and colorists by imparting their ideas concerning American style tendencies.

Reviewing the novelty fabrics, we find that light colors are to be given more attention by tailors catering for the patronage of the idle rich. In top coatings, for example, pure French pastels will be imported for sport coats for men who wear garments only a few times or on special occasions.

With stylers returning from foreign woolen centers, mention is made of soft browns which now are favored by Americans who make matters of dress a careful study.

One hears much said about white warp or silver warps shot with darker grays and decorated sparingly with such soft colors as orchids, blues and washed out reds allied to raspberries. But when it comes to selecting colors with which to operate a clothing establishment or to "run" a mill grays are everywhere favored.

Nevertheless, blues in variety, though of a dark nature decorated with reds principally, are relied on for one of the corner stones of the clothing industry. Patterns are small and unobtrusive with a few glen plaids to give a dash of life collections.

Plaid back overcoatings will be retained, although the newest idea is expressed in Chesterfields having silk lining and velvet collar. As in women's wear, Oxford gray is indicated for a vogue.

Textiles at Annual New England Fair

WORCESTER, MASS.—The new $125,000 industrial building of the Worcester (Mass.) Agricultural Society was opened to the public for the first time this week in connection with the annual New England fair, Sept. 28–Oct. 1. It was under the direction of Chester I. Campbell, Boston, secretary-treasurer of the Textile Exhibitors' Association, who had charge of the renting of space, assisted by J. W. Bragdon, Boston. Assisting Mr. Campbell in the promotion of the exhibition were a number of prominent Worcester manufacturers, including Dr. Homer Gage, president of the Crompton & Knowles Loom Works and Clinton S. Marshall, district manager of the American Steel & Wire Co. Among the textile exhibits were looms built by the Crompton & Knowles Loom Works which wove towels, blankets and ginghams and products of the Graton & Knight Co., M. J. Whittall Associates, Howard Bros. Mfg. Co., and Brewer & Co., Inc., all of Worcester.

MOHAWK, N. Y. The Duofold Health Underwear Co. is now operating on full time day schedules with a normal working force.

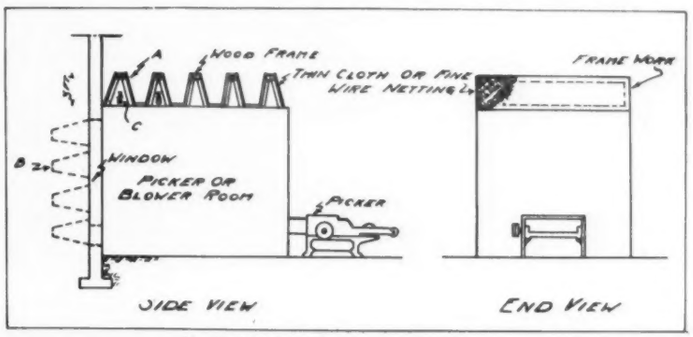
Improved Air Relief

For Picker or Blower Rooms—Netting on Frames

By J. Limbrunner

The writer has always found it rather difficult to properly vent or relieve the room into which a picker delivers the picked silk, etc., and was therefore considerably interested in the method employed by a color concern for similar purposes.

This improved air relief is illustrated by the accompanying diagram. Wood frames A are fastened on top of the blower room in the manner indicated, and can be about 3 ft. high. The sides of these frames are covered with clothing or netting of suitable density to retain dust and lint but permit the air to escape. Where these frames cannot be placed on top of rooms, they may be put outside of windows as indicated in dotted lines at B. Where fire protection is to be provided, sprinkler heads placed as shown in C are suggested.



Air Relief for Picker or Blower Rooms

*SALEM, ORE. The Oregon Linen Mills, Inc. have taken out a permit for the erection of a one-story power plant and office in the Rosedale district, where a new mill will be operated.

Carpet Industry Census

1925 Product Slightly Less Than 1923 but Far Above 1921

WASHINGTON, D. C.—The Department of Commerce announces that, according to data collected at the biennial census of manufactures, 1925, the establishments engaged primarily in the manufacture of wool carpets and rugs, other than those made of rags, reported products to the total value of $188,902,890. This amount represents a decrease of 5.3% as compared with $199,480,623 in 1923 but exceeds the corresponding total for 1921, $103,880,500, by 81.8%.

Of the total for 1925, $183,008,304 was contributed by carpets and rugs and $5,894,586 by miscellaneous products. The production of carpets increased from 13,057,335 sq. yds., valued at $20,393,800, in 1921, to 21,722,705 sq. yds., valued at $51,524,378, in 1923. The production in 1925 showed a slight increase in quantity, to 21,859,377 sq. yds., but the value decreased to $49,023,624.

The production of rugs made of sewed strips increased from 12,070,465 sq. yds., valued at $25,951,125 in 1921, to 17,943,379 sq. yds., valued at $65,104,745 in 1923, but declined to 14,264,113 sq. yds., valued at $53,627,772, in 1925. Output of rugs woven whole

Another important advance

Super-Extra Yarns

THE finer the filament, the finer the fabric. Therein lies the great advantage of the new Celanese brand Super-Extra yarns.

These new yarns include a 75-denier yarn composed of 20 instead of the usual 13 filaments, and a 150-denier yarn composed of 40 instead of 26 filaments.

For the 75-denier yarn, this 50% quality-increase comes to you without anv increased cost; and for the 150-denier yarn, at an advance in price of only 10 cents a pound.

These Super-Extra yarns have proven particularly valuable in such constructions as satins and radiums, to which they impart a luxuriously soft feel, perfect draping qualities, and a luster as lasting as it is brilliant.

Celanese brand yarn is neither silk nor rayon. It is highly elastic and remarkably durable; and it has unique hygienic qualities. Dyed with its special SRA dyes, it is fast to sun, suds, salt-water and perspiration.

CELANESE

REG. U.S. PAT. OFF.
BRAND YARNS

The AMERICAN CELLULOSE & CHEMICAL MANUFACTURING COMPANY, *Ltd*

15 EAST 26TH STREET, NEW YORK

WORKS AT AMCELLE (NEAR CUMBERLAND) MARYLAND

CELANESE is the registered trademark, in the United States, of The American Cellulose & Chemical Manufacturing Company, Ltd., to designate its brand of yarns, fabrics, garments, etc.

increased from 27,777,813 sq. yds., valued at $53,692,611 in 1921, to 43,576,379 sq. yds., valued at $75,528,350 in 1923. The quantity decreased to 35,977,119 sq. yds. in 1925, but the value increased to $80,356,908.

Of the 69 establishments reporting for 1925, 42, or nearly three-fifths of the total, were located in Pennsylvania, 9 in Massachusetts, 9 in New York, 7 in New Jersey, and 1 each in Connecticut and North Carolina. Philadelphia, with 39 establishments and products amounting to $52,472,851 in value, reported 56.5% of the establishments and 27.8% of the value of products for the industry. In 1923 the industry was represented by 79 establishments, the decrease to 69 in 1925 being the net result of a loss of 13 establishments and a gain of 3.

Summary statistics for the industry are given below. The figures for 1925 are preliminary and subject to such correction as may be found necessary upon further examination of the returns:

TABLE 1—SUMMARY FOR THE INDUSTRY: 1925 and 1923.

United States	1925	1923
Number of establishments.	69	79
Wage earners (average number)*	33,886	35,217
Maximum month	Mar. 35,925	Apr. 35,641
Minimum month	Aug. 32,505	Jan. 34,813
Per cent of maximum	90.5	97.7
Wages	$43,382,517	$48,528,430
Cost of materials (including fuel, rented power, and mill supplies)	104,195,624	97,473,644
Value of products	188,902,890	199,480,623
Value added by manufacture†	84,707,266	102,007,979
Horsepower	63,008	53,852
Philadelphia		
Number of establishments.	39	45
Wage earners (average number)*	7,587	8,749
Wages	11,160,554	12,590,700
Value of products	52,472,851	62,027,533

*Not including salaried employees.
†Value of products less cost of materials.

TABLE 2—PRODUCTS, BY KIND, QUANTITY, AND VALUE: 1925 and 1923.
(In thousands, last 000s omitted.)

	1925 Square yards	1925 Value	1923 Square yards	1923 Value
Total value		$188,902		$199,480
Carpets, total	21,859	49,023	21,722	51,524
Axminster & mog.	4,592	9,814	4,285	11,531
Wilton	2,399	15,463	2,315	13,034
Brussels	25	71	52	160
Tapestry velvet	8,824	17,128	7,897	17,706
Tapestry Brussels	1,271	1,316	1,322	1,593
Ingrain	819	653	692	622
All other	2,925	4,575	4,655	6,875
Rugs made of sewed strips, total	14,284	53,627	17,943	65,104
Axminster & mog.	6,041	14,387	10,892	26,900
Wilton	5,923	35,864	6,633	36,662
Brussels	26	101	383	1,419
All other	2,261	3,274	34	115
Rugs, woven whole, total	35,977	80,356	43,576	75,528
Axminster & mog.	15,980	38,153	9,566	22,245
Wilton	1,450	6,073	1,086	4,791
Tapestry velvet	7,740	17,609	9,826	20,224
Tapestry Brussels	4,228	5,974	11,938	15,940
Smyrna	492	1,214	1,095	2,211
Chenille-Axminster	427	4,952	552	4,357
Wool & paper fiber	1,846	1,589	6,019	3,078
Colonial or rag*	27	20	56	79
All other	3,672	4,769	3,433	2,600
All other products, value		5,894		7,323

* These figures relate only to rag rugs made by establishments engaged primarily in the manufacture of other classes of carpets and rugs. Establishments whose chief products are rag carpets and rugs are classified separately under the industry designation "Carpets and rugs, rag."

TABLE 3—MATERIALS, BY KIND AND QUANTITY: 1925.*

Kind	Quantity (pounds)
Wool:	
In condition purchased	85,669,687
Equivalent of above in scoured condition	57,999,697
Animal hair	2,834,382
Cotton	11,131,462
Waste and noils	2,580,191
Yarns purchased:	
Woolen	30,800,843
Worsted	8,155,279
Cotton	19,648,844
Linen	476,816
Jute, ramie, and other vegetable fiber	37,450,921
Other yarns	4,692,329
All other materials	1,581,449

*No data for 1923 or 1921.

Protection and Decoration

How Suitable Fences May Serve Both These Purposes, Reduce Labor Turnover, and Establish Good Will

*By Russell Byron Williams**

WE have probably given little thought to fencing as a factor for the increasing of business. We have been wont to consider it solely as a protective medium. Now, in recognition of the value of beauty, executives and managers of a great many different enterprises are investigating more and more the possibilities in using this medium for beautifying as well as protecting their property.

In earlier years, protective fencing was usually of the common wood type. These fences were, for the most part, merely plain wood boards nailed to cross bars mounted on cedar posts—an arrangement somewhat remindful of a stockade. These, of course, served a useful purpose, but the rapidity of decay, the ease with which boards could be removed and ingress thus effected and also the ease with which such a fence might be burned or destroyed, as in the case of a strike, clearly demonstrated the imperative need for a more durable, less destructible type of fence.

Wrought Iron

Relatively early, therefore, the wrought iron metal fence made its appearance. This type usually consisted of plain iron posts, set erect and joined near the top and bottom by bars, the posts generally being tapered as a silent warning to trespassers. Laying aside the fact that the old wrought iron fences were invariably unsightly, sharply advanced prices for both material and labor soon made this type of protection prohibitive. In isolated instances or in limited application, however, wrought iron fences and gates are still to be seen; the difference being that the wrought iron fence employed today is usually erected without consideration to cost and is merely intended to be an example of the iron working art.

These isolated instances have augmented the appreciation of beauty, however, with the result that many such fences have been replaced by exactly the opposite type of barrier—the hedge fence. Thus it is that in some instances, notably in the suburban districts or where adjacent ground is not needed for the storage of material, beautiful close-cropped privet hedges are seen—with an invariable psychological reaction favorable to the enterprise. Such fences or hedges offer no serious obstruction to intruders, however, and because of this fact are giving way to the more protective type of fence—woven wire link.

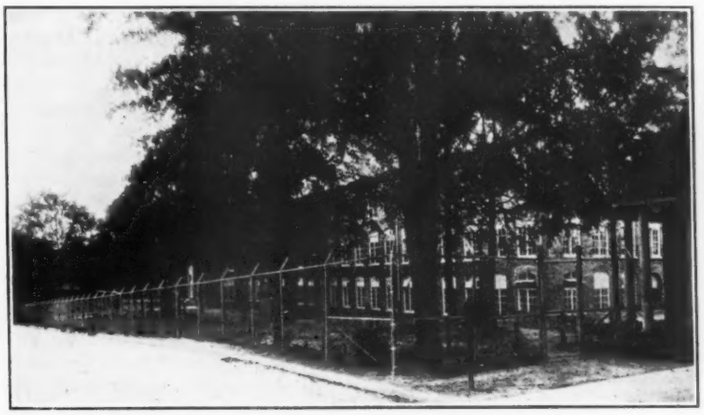


Fig. 1. Fence at Plant of Clinton Cotton Mills, Clinton, S. C. Blue Grass and Well-Trimmed Trees Add Monetary Value to the Property as Well as Contribute to the Good Will of the Neighbors and the Pride of the Employes. (Courtesy of Page Steel & Wire Co.)

* Page Fence & Wire Products Association.

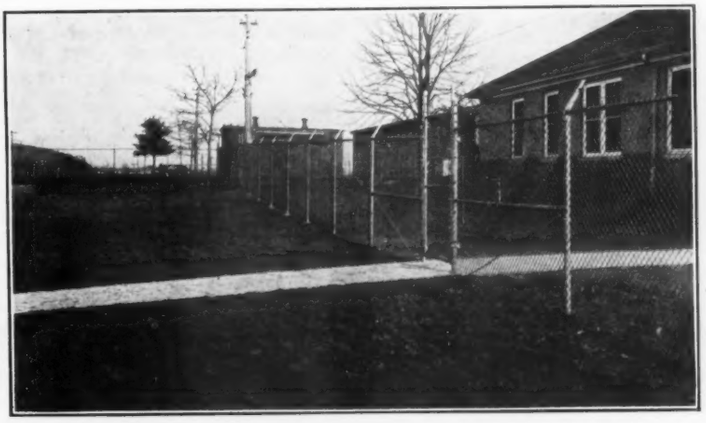


Fig. 2. Fence at Plant of Judson Mills, Greenville, S. C. Note the Close-Cropped Lawn, the Distant Privet Hedge, and the Young Trees That Will, in a Few Years, Afford Shade and Beauty. (Courtesy of Page Steel & Wire Co.)

Woven Wire Link

This type of fence, while not decorative in itself, is certainly far from unsightly. Because of the increased appreciation for beauty many users of woven wire link fabric have learned to utilize this protective medium as a basis for ivy, honeysuckle, Virginia creeper, rambler roses and other decorative floral growths. These flourish rapidly, require but little attention, and provide a most decorative effect.

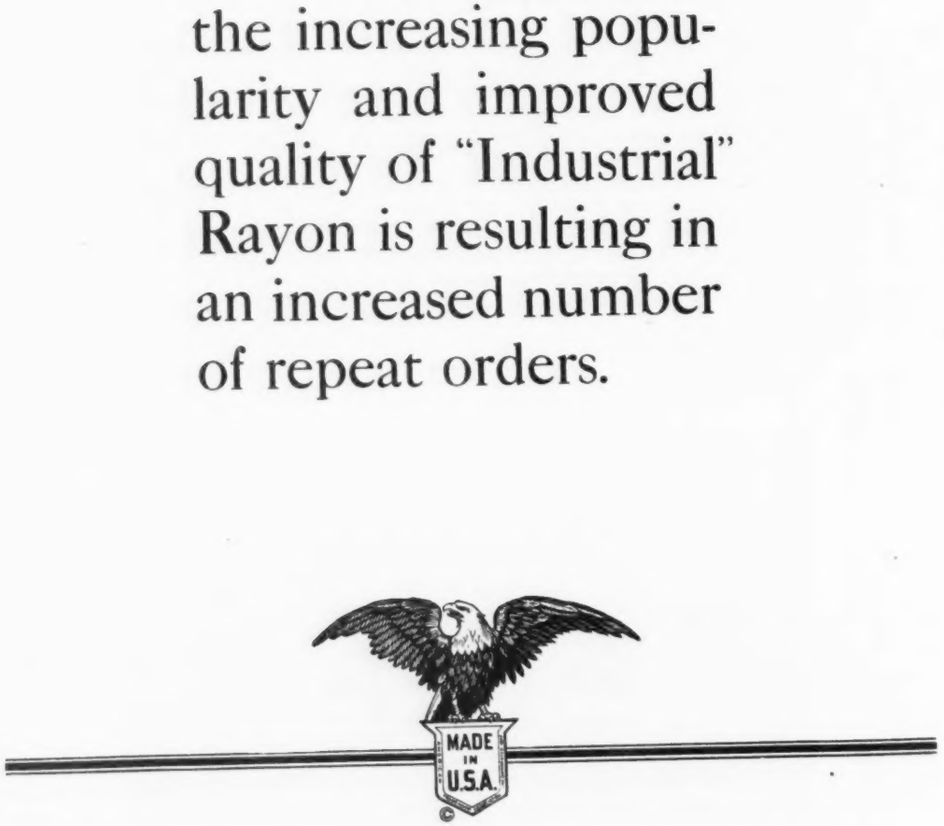
In this, a purpose at once aesthetic and valuable is served, because the employes of a plant so protected can hardly fail to be responsive (although perhaps without expressing it) to the essential beauty of their surroundings. Fences of this type, covered with natural growth, tend to mitigate the occasionally forbidding "prison-like" atmosphere. And whether we sufficiently realize it at the present time, it is nevertheless a fact that such favorable psychology, however unanalyzed or unexpressed, has a very definite bearing on turnover costs, on the attitude of the operative to the management and on production. Pessimistic reveries on the part of workers are seldom so evident when passing an ivy hidden fence as when passing a bare stone or iron bar fence—notwithstanding the fact that the same degree of protection is afforded. Such a fence furthermore never fails to elicit favorable comment from passerby—which means that good will for the company is being developed—and good will is any company's greatest asset. The single element of good will was recently evaluated by the Shredded Wheat Biscuit Co. as being worth more than five million dollars.

Protection Also

By the foregoing the writer does not wish to give the impression that he believes in beauty or attraction to the exclusion of adequate and permanent protection. He fully realizes that industrial property of any kind must first of all be protected, that the duty of all fencing is first to keep off unwelcome intruders and prevent trespassing, to make possible the utilization of open ground for the storage of material, and to minimize hazards to both employes and the public. For such purposes it is impossible to find a type of fence more universally suitable than the heavily galvanized, woven wire link fabric. Such a fence is of long life and positively nonclimbable. It is much less expensive than a wrought iron fence or a

East South North West

¶ In every section of the United States, the increasing popularity and improved quality of "Industrial" Rayon is resulting in an increased number of repeat orders.



masonry wall; and, considering the advanced prices of lumber, it is frequently no more expensive than wood. Considering its utility it is economically the most acceptable to a wide variety of industrial plants.

Such a fence can today be seen standing as the omnipresent guard to property around a great many textile mills. One such installation coming to mind is the exceptionally attractive installation made by the Clinton Cotton Mills at Clinton, North Carolina (Fig. 1). Naturally, the primary purpose of this fence is to afford protection, but the grounds behind the perpetual guard have been sodded and the trees kept well trimmed with the result that the property has an inviting rather than a repelling appearance. Another mill that has successfully used woven wire link fabric to beautify as well as protect property is the Judson Mills, Greenville, S. C. (Fig. 2).

These are but two instances taken at random from the hundreds of protected textile plants of New England and the South. In all cases, the primal purpose of such fencing is, as it should be, property protection. In a number of these cases, however, attractive decorative schemes have followed the installation of the fence with the result that there is not only afforded adequate protection but the company itself gains the good will and favorable reaction that is the invariable concomitant of beauty. This will doubtless become increasingly in evidence as industry more fully realizes the beneficial effect of beauty. It remains for all users of fencing to learn that the utterly practical safeguard to property also lends itself to decorative purposes—and that any reasonable effort expended in the direction of decorative effect always comes back to the company in the form of augmented public good will, reduced labor turnover, increased civic pride, and a more healthy mental attitude on the part of the workers.

N. C. Textile School at Raleigh Opens

RALEIGH, N. C.—The Textile School of the North Carolina State College, opened on Sept. 22 with a good enrollment of students. Applications have been coming in for several months for the textile school. A large addition has been made to the textile building, and much new equipment installed. This will increase the capacity of the building about 50%. Two additions have been made to the faculty. Prof. H. R. Gaffney, a graduate of the Georgia School of Technology, and a graduate also of Charleston College, has been elected assistant professor of designing. Dr. Owens Hand Browne, a graduate of the University of North Carolina, and who received his Ph.D. degree at Johns Hopkins University, becomes instructor in dyeing.

UTICA, N. Y. The Paragon Knitting Co. is now operating on full time day schedules with its regular working force.

Window Illumination

Dirt on Panes Retards Production—Experiments With Various Types of Window Shades

AT the twentieth anniversary convention of the Illuminating Engineering Society at Spring Lake, N. J., Sept. 7 to 10, considerable attention was given the subject of window lighting. It is interesting to note, that, although the value of suitable electric equipment is well recognized today, but little attention is given the control of the natural light that pours in through windows. Due emphasis is seldom laid upon the importance of keeping the glass clean, yet dirt on the panes affects the natural illumination under which most of the work in a mill is done. It affects production in the same way that poor artificial lighting does, causing accidents, waste of materials, and slow speed among the workers.

In a paper "Making Your Windows Deliver Daylight," W. C. Randall and A. J. Martin discussed the effect of dirt accumulation upon the daylight transmitting properties of glass. Part of the work was done in buildings of the Detroit Steel Products Co., with which company the authors are connected, and part with experimental models set up at the University of Michigan, in cooperation with Prof. H. H. Higbie. There was a surprisingly close agreement in the results obtained.

Some of the interesting points brought out by the paper were: (1) After a period of four months with the windows uncleaned, the amount of light which they would transmit was only 25 to 50% of that for clean windows. (2) The rate of decrease in transmitting power was greatest when the windows had just been cleaned. (3) About 75% of the decrease in transmitting power was due to dirt on the inside of the window. (4) The type of glass used made comparatively little difference in the amount of dirt collected.

The authors of the paper recommend that, in case a yearly schedule for cleaning is maintained, the cleaning should be done in the fall so as to let in the maximum amount of light during the winter months when it is most needed. They also advise a frequent schedule for cleaning the inside of the windows with a damp cloth as a very effective and inexpensive method for increasing the usefulness of windows.

Professor Higbie presented a paper entitled "The Control of Window Light." Although reflectors are employed almost universally today in the artificial lighting of factories, offices, and other buildings, to direct the light where it is needed and to insure that the largest possible volume of light will be available, we have not given much attention to the control of natural light from the windows.

Discussing the effect of the various means of control upon the quantity and quality of the window illumination, Professor Higbie presented data from numerous surveys embracing shades covering the tops of windows, shades covering the bottoms of windows, and Venetian blinds covering the whole of windows. "So far all our findings appear to indicate," he said, "that control of light from windows by means of Venetian blinds is better than control by shades covering the lower sash, which itself is better than control by shades covering the upper sash.

"Whatever may be the merits of using roller shades of material having good transmitting properties, the fact remains that most window shades in ordinary use transmit very little, and such control as they exercise is by merely absorbing and destroying the light. In contrast with such a wasteful method, the Venetian blind presents a solution of the problem which seems to have great possibilities, in that the light may be redirected and made useful instead of being absorbed. If the slats be sloped up inward, the light from sun and sky is largely reflected back out of doors and all values of illumination in the room, maximum and average, as well as minimum, should be decreased. If the slats be sloped down inward (or up outward) and are of light color so as to have good reflecting value, a considerable part of the light striking the window from outside, which otherwise would pile up near the window where not needed, is either thrown directly to the rear of the room where most needed or is thrown first to the ceiling and from it reflected more or less effectively back to the working planes preponderantly at the rear of the room. The effect of changing the slope of the slats is easy to follow with the unaided eye, it being possible to throw a vaguely defined bright zone across the ceiling to the rear wall; and by means of a photometer it is easily shown that great increases may be produced in either the horizontal or vertical illumination at the rear of the room, with corresponding decreases in the maximum illumination near the windows."

In an analysis of natural illumination through Venetian blinds, Professor Higbie said, "From a theoretical viewpoint it appears that Venetian blinds, properly constructed and used, should have an advantage over all the ordinary types of window shades in that they are able to redistribute the light which they intercept, and render it useful, instead of merely absorbing and destroying it." The author thought at first that, by means of this redirecting property of Venetian blinds, the minimum illumination at the darkest portion of the room could be increased while the maximum is being diminished; but so far such result has been achieved in only a minority of the surveys made. This is quite surprising to one who watches while the slope of the slats is changed from one extreme to the other, the illumination at the rear of the room appearing to be increased thereby to such extent that it should be greater than with bare windows.

"In an attempt to learn how and to what extent the Venetian blind transfers light from near the windows to the rear of the room, a series of tests was run in such a manner as to show what fraction of the total illumination on the horizontal working plane at each station was obtained directly from the windows, and what part was due to light that had been reflected from the bounding surfaces of the room. After the illumination on the horizontal test plate had been measured at each station, a small black screen was erected in such manner as to cut off from an eye at that station all view of the windows and no more, and then another measurement was made of illumination on the test plate. The first reading was total illumination, the second was indirect component of this total (assuming that conditions had not changed between the two readings), and the difference should be the direct component.

"Control of natural illumination in interiors by means of roller shades which cover the upper part of the window is the least desirable method. It is better to use shades which cover the lower portion of the window, the roller being mounted at the meeting rail of the upper and lower sash, or at the window sill, or adjustable in height. It is best to use Venetian blinds, which operate to redistribute the light rather than to absorb it."

To Measure Tautness of Fabric Covering of Aircraft

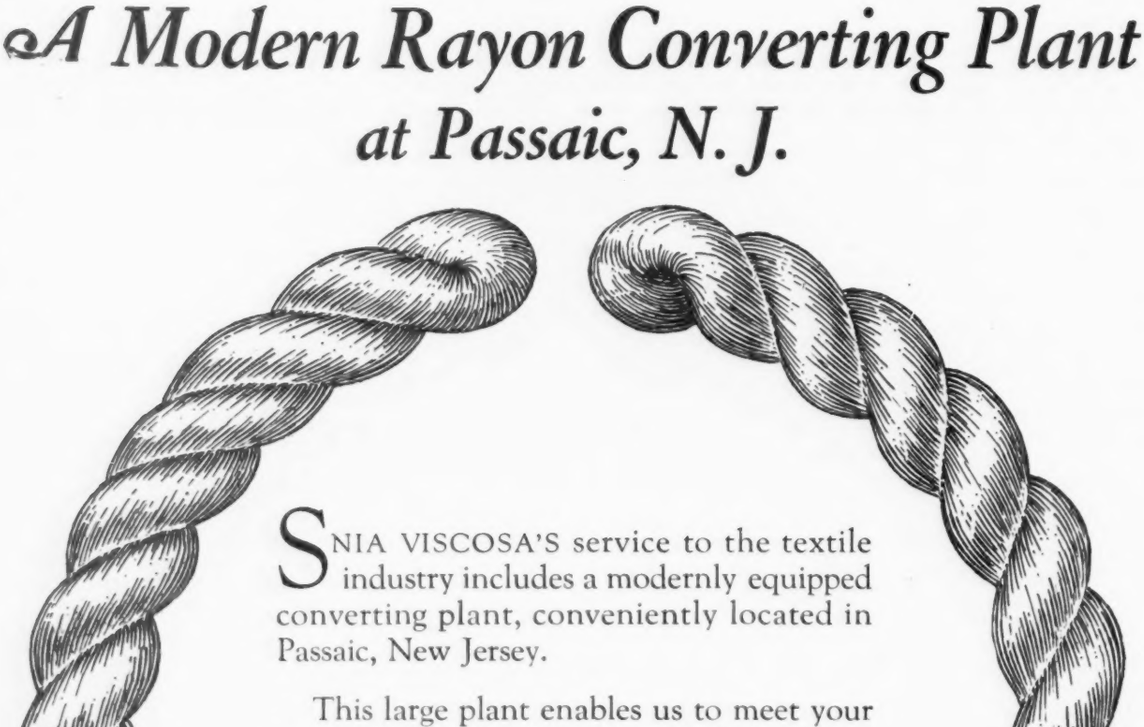
WASHINGTON, D. C.—For years users of aircraft have been searching for a satisfactory instrument with which to measure the tension in the fabric covering of airplanes and airships. Through the efforts of the Bureau of Standards such an instrument is now available.

The degree of tension in the fabric covering of airplane wings and the outer skin of airships is a matter of great importance, because if they do not have the proper tautness the operation of the plane or ship will not be satisfactory. In both cases the fabric cover must be tight enough to prevent flapping . In the case of a wing covering some excess tautness does no harm, but in the case of an airship if the cover is too tight it may throw an excess strain upon the metal framework.

The new instrument was constructed by the Bureau of Standards for the Bureau of Aeronautics of the Navy Department. It is simple and convenient to operate, and is so constructed that a portion of the fabric may be isolated and the tension in it measured without in any way disturbing the covering.

ROBESONIA, PA. The S. S. Underwear Co., Inc. has discontinued business.

A Modern Rayon Converting Plant at Passaic, N. J.



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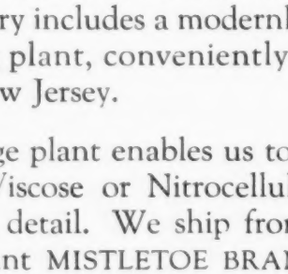

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THE PERSONAL PAGE

Malcolm B. Stone, vice president and treasurer of the Ludlow (Mass.) Mfg. Associates, F. C. Dumaine, treasurer of the Amoskeag Mfg. Co., Manchester, N. H., and John S. Lawrence of Lawrence & Co., Boston, president of the New England Council, are among the founder members of the Business Historical Society, Inc., the purpose of which is to encourage and aid the study of the evolution of business in all periods and in all countries, and which was indorsed by the executive committee of the Associated Industries of Massachusetts at its last meeting.

Matthew P. Whittall, president and treasurer of the M. J. Whittall Associates, Worcester, Mass., gave his annual dinner to the athletic managers and members of the various athletic teams of the plant at the Warren Hotel, that city on Sept. 29.

Earl C. Miller, treasurer of the Booth Mfg. Co., New Bedford, Mass., has resigned his position to become assistant agent to Frank I. Neild at the Neild Mfg. Corp. Mr. Miller was made treasurer at the Booth when Fred W. Steel resigned.

William Woods, of the York Street Flax Spinning Co., New York, has been appointed treasurer of the Irish & Scottish Linen Damask Guild, with offices at 260 West Broadway, New York, to fill the vacancy caused by the death of Alex L. Jordan. A. Temple Blackwood, of Ross Bros., Inc., has been elected to the board of directors.

Z. F. Wright, president and treasurer of the Newberry (S. C.) Cotton Mills, and the directors of these mills gave a dinner in honor of J. Marion Davis, superintendent of the mills, who is completing his twenty-fifth year in its employ. The dinner was served at the Newberry Country Club on the evening of Oct. 1.

A. B. Carter of Gastonia, N. C., manufacturers' agent and treasurer of Mill Devices Co., Inc., has returned from a business trip to England. Mr. Carter was abroad for five weeks. He was accompanied by E. E. Boyce of Mill Devices Co., Inc.

J. O. Blackmon has been appointed general manager of the Atlantic Cotton Mills, Macon, Ga. He was formerly superintendent of the Hillside Cotton Mills, La Grange, Ga.

Chester A. Bolles, general manager of Fownes Bros. & Co., Amsterdam, N. Y., and Miss Ruth E. Yelverton were married last week in that city.

Crawford F. James, proprietor of Elizabeth James Mills, Marion, N. C., made a hole in one score on the Marion Lake Club golf links Sept. 18. An official report was made and Mr. James anticipates with pleasure becoming a member of "The Hole in One Club of the U. S. A."

Baseball team of the Aberfoyle Mfg. Co., Chester, Pa., won the third of the five game series played with the team representing Eddystone Mfg. Co., Eddystone, Pa., for the championship of the Delaware River League, defeating Eddystone by the score of four to three.

J. R. Plunkett, superintendent of the Mills No. 1 and 2 of the Ensign Cotton Mills, Hampton, Ga., has resigned that position.

J. Cooper has resigned as superintendent of the Hartwell (Ga.) Mills due to ill health.

W. J. Bauer has resigned his position as superintendent of the Sylva Knitting Co., West Reading, Pa.

Herbert Coe has resigned as superintendent of the Brookside Mills, Knoxville, Tenn.

S. F. Sheldon, formerly general superintendent of the Gordon Woolen Mills, Inc., North Oxford, Mass., has succeeded Frank E. Learned as superintendent of the Northdale Woolen Mills, Northboro, Mass.

S. R. Power, superintendent of the Broad River Mills, Blacksburg, S. C., has resigned and accepted a position with the Chadwick-Hoskins Co., Charlotte, N. C.

L. H. Rice, superintendent of the Manchester (Ga.) Cotton Mills has resigned to accept a similar position in the Brookside Mills, Knoxville, Tenn.

A. F. Garrison has taken a position as superintendent of the Hartwell (Ga.) Mills.

W. V. Jones, has resigned as superintendent of the Icard (N. C.) Cordage Co.

L. V. Andrews, formerly superintendent of the Red Bank Mill of the Martel Mills, Inc., Lexington, S. C., now holds a similar position in the Middleburg Mill of the Martel company, Batesburg, S. C.

R. H. Maupin, superintendent of the Star Thread Mills, Athens, Ga., has resigned to accept the position of general manager for the Galvez Mills, Galveston, Tex.

T. B. Stevenson has resigned as general superintendent of the Cotton Mills Products Co., Natchez, Miss.

W. M. Moore, overseer at the Musgrove Mills, Gaffney, S. C., has been promoted to the superintendency of the Broad River Mills, Blacksburg, S. C.

John Pearson will be superintendent of the new plant of the Sauquoit Spinning Co. of Alabama, at Gadsden, Ala.

J. Westmoreland, superintendent of Mill No. 5 of the Chadwick-Hoskins Co., Pineville, N. C., resigned recently to accept a similar position in the Williamston (S. C.) Mills.

William B. Grundy, who recently resigned as assistant superintendent of the Uxbridge (Mass.) Worsted Co., Inc., has accepted a similar position with the Globe Mills of the American Woolen Co., Utica, N. Y.

E. L. Sheridan, overseer of carding and spinning at the Jefferson, (Ga.) Cotton Mills, has resigned and accepted a position as superintendent of the Ensign Cotton Mills, Hampton, Ga.

G. I. Parvis, overseer of dyeing for the Bradley Mfg. Co., Columbus, Ga., has been promoted to the position of superintendent.

H. E. Littlejohn, formerly assistant superintendent of Judson Mills, Greenville, (S. C.) is now in the cost department of Monaghan Plant of the Victor Monaghan Co., in the same city, with which he was connected some time ago. J. J. Aylward, formerly general superintendent of Judson silk mill, has succeeded Mr. Littlejohn.

Ernest Moore, formerly with the Lancaster (S. C.) Cotton Mills, has accepted a position in the office of the Proximity Print Works, Greensboro, N. C.

Mrs. Cora H. Dodson is now head of the welfare department of the American Spinning Co., Greenville, S. C. She succeeds Miss Ruth Camp, who recently went to North Carolina.

Vincent McElroy, designer for the Manton (Rhode Island) Mills has resigned his position with that company.

Freemont Getchell has resigned his position as boss spinner for the Fabyan Woolen Co., Medway, Mass., after several years' service and with his family will shortly remove to Maine.

John J. Brown has resigned his position with the Hamilton (R. I.) Web Co.

Herbert Billings has taken the position as overseer of finishing for the Tilton Mills (American Woolen Co.), Tilton, N. H. Mr. Billings comes from the Lowell (Mass.) Dye Works.

W. L. Brightwell, second hand in No. 4 spinning, has been promoted to overseer of No. 3 spinning at the Riverside & Dan River Cotton Mills, Danville, Va.

William Marshall, former overseer of the spinning department of the Fabyan Woolen Co., Medway, Mass., has returned to that position, succeeding Freemont Getchell, resigned.

William J. Johnston, foreman of the drawing department of the Whitin Machine Works, Whitinsville, Mass., for the last 23 years retired on Sept. 24 from active service of 52 years and six months at the works.

R. C. Woody, overseer of the cloth room at the Clinchfield Mfg. Co., Marion, N. C., has resigned that position.

Geo. R. Daley, overseer of dressing for the Burlington Mills (American Woolen Co.), Winooski, Vt., has resigned his position with that company.

Harry Wilkinson has been promoted to the position of superintendent of the cloth department of the Ayer Mill of the American Woolen Co., Lawrence, Mass.

W. M. O'Daniel, overseer of carding in the Aiken Mills, Bath, S. C., has resigned that position.

W. F. Pruitt, overseer of the weaving department of Mill No. 2 of the Chadwick-Hoskins Co., Charlotte, N. C., has tendered his resignation.

Frank W. Wilson has resigned his position as second hand in the cloth finishing department of the Otis Co., Ware, Mass., to accept one as overseer of the same department with White Bros., Inc., Winchendon, Mass.

R. A. Hughes has taken a position as overseer of spinning in Mill No. 5 of the Erwin (N. C.) Cotton Mills Co.

W. N. McCann, formerly overseer of carding at the Osprey Mill of the Bibb Mfg. Co., Porterdale, Ga., is now an overhauler for that company.

Lewis H. Shaw, loomfixer in the lower weaveroom of the Jefferson (Mass.) Mfg. Co., and Miss Rena C. Beal, Worcester, Mass., were recently married in New York.

Cyrus Gould has taken the position as overseer of weaving for the Warrenton Woolen Co., Torrington, Conn. Mr. Gould has been employed as second hand for this company.

George D. Clarke has taken the position as overseer cotton ring spinning for the Joseph Simpson Knitting Mills, Toronto, Ont., Canada.

W. F. Chavons is now overseer of carding at the Aiken Mills, Bath, S. C.

A. L. Remington has taken the position as overseer of dyeing for the Farnsworth Mills, Central Village, Conn. Mr. Remington comes from Franklin, Mass.

William J. Anderson has accepted a position as overseer of the card room of the Northdale Woolen Mills, Inc., Northboro, Mass. He comes from North Oxford, Mass.

F. L. Craven is now overseer of No. 1 and 2 carding for the Borden Mfg. Co., Goldsboro, N. C.

Alfred Witschel has been promoted to the position of superintendent of the worsted department of the Ayer Mill of the American Woolen Co., Lawrence, Mass.

G. M. Hill has taken a position as night overseer of carding in Mill No. 2 of the Carolina Textile Corp., Dillon, S. C.

J. O. Godfrey, who has been overseer of No. 3 spinning at the Riverside & Dan River Cotton Mills, Danville, Va., is now overseer of No. 1 spinning at the same plant.

F. E. Holley has been made overseer of the cloth room at the Aiken Mills, Bath, S. C.

William Tobin, overseer of dyeing for the Souhegan Woolen Co., Wilton, N. H., has resigned his position with that company.

B. C. Barton is now night overseer of weaving at the Elberton (Ga.) Mills. He formerly held a position with the Merrimack Mfg. Co., Huntsville, Ala.

R. H. Rouse is still overseer of weaving for the Darlington (S. C.) Mfg. Co., the report of his resignation being erroneous.

Bard Ivey has been made night overseer of twisting at Mill No. 2 of the Carolina Textile Corp., Dillon, S. C.

Walter Long has resigned as overseer of No. 1 spinning at the Riverside & Dan River Cotton Mills, Danville, Va.

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QUESTIONS AND ANSWERS

CORRESPONDENCE WITH READERS

Under this head, we undertake to answer, free of charge, to the best of our ability questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. In this way answers can be given which will be of immediate technical value to the correspondent and to others in the same line. Inquiries pertaining to textile processes, machinery improvements, methods of management, the markets, etc., are especially invited as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld—EDITOR.

Boucle Yarn

Technical Editor:

We would appreciate your giving us information relative to the making of a boucle type of yarn. This is to consist of a twisted yarn, showing one thread in rather exaggerated loops. (5895)

Boucle yarns are produced by the twisting of different sizes of yarn together, and also by allowing one of the combination to move quicker than the others in the twisting, the thread which has the greater speed being compelled to form into loops or curls upon the surface of the other, owing to the difference in length. Boucle effects may be formed in the cloth by fulling, one of the threads being of a hard and unshrinkable character, the other being a soft milling fiber and of a much heavier count of yarn, so as to overpower the unshrinkable one and cause it to curl around the fulling one, owing to the loss of length or shortening process which takes place in the operation of fulling.

Usually these yarns are a combination of a low quality worsted with mohair, the mohair thread being the thicker and allowed to run in varying proportions of length, generally two inches of mohair to one inch of worsted, or other proportions, according to size of loop or curl required. Of course it is necessary to bind the two together with another thread, as otherwise they would separate in the cloth, or the curl thread would be liable to draw straight in patches, causing a very unsightly appearance upon the face of the fabric.

One very acceptable form of yarn which may be made in many very suitable and pleasing effects is as follows: Two-ply 32s twisted with single 10s, the 10s being allowed to run two inches to one inch of the 2-ply. This, in the operation of twisting, causes the thread of 10s to form into small loops upon the surface of the 2-ply. This compound thread is then twisted with one of single 32s in the reverse direction, which binds the thread into a weavable yarn and fixes the curls permanently. The effect of fulling on this class of fabric causes the thick curl yarn to burst and swell into a very lofty and springy surface.

* * *

Sulphur Dyed Goods

Technical Editor:

I am attaching hereto two sample clippings, one marked "A" and one marked "B." I will appreciate it if you will determine for me whether or not these samples have been sulphur or indanthrene dyed. (5890)

The two samples are of a heavy cotton fabric dyed a gray shade. Neither of these samples were reduced when heated with a solution of hydrosulphite and caustic soda. A weak solution of sodium hypochlorite very quickly decolorized both samples. These results, coupled with the nature of the goods, lead us to believe that the dyeing was done with sulphur colors.

* * *

Cloth Is Mercerized

Technical Editor:

We would be pleased to have you advise us if the cotton in the enclosed samples has been mercerized. Also, what test can be made outside of the appearance to determine if goods have been mercerized? What effect has mercerization on mixed silk and cotton goods? (5884)

The two samples of cloth appear to have been mercerized, inasmuch as they behave very similarly to a standard mercerized sample, and dissimilarly to a piece of unmercerized bleached cotton fabric.

Several methods of testing were employed, namely: (a) aluminum chloride and iodine; (b) zinc chloride and iodine; (c) benzopurpurine staining, followed by acidification with and without subsequent reduction with titanous chloride; (d) methylene blue; and (e) iodine in potassium iodide.

Of all these methods, the iodine in potassium iodide solution gave the most positive distinctions, and was the most rapid and simple. It was carried out as follows: (1) Preparation of solution — 20 grams of iodine are dissolved in 100 cc. of saturated potassium iodide solution (127.9 grams potassium iodide in 100 cc. of water at 0 deg. C.); (2) The test — Immerse given samples (purified from starch finishes and bleached if colored) with samples of mercerized and unmercerized pieces (preferably bleached) for 15 sec. in the solution. Remove samples, squeeze in the fingers, and immerse in a large basin of cold water, washing all the samples equally. In a few seconds, or after a few washings, the mercerized samples will be distinguishable from the unmercerized by their greater retention of the blue color. The greater the degree of mercerization the greater the difference of color affinity. The iodine is much more easily washed out of the unmercerized sample.

The aluminum chloride test is made of steeping a sample of cloth in a solution of 46 grams of aluminum chloride in 100 cc. water to which 15 — 20 drops of a 5% iodine in potassium iodide solution have been added. Mercerized material turns a dark chocolate-brown color, while unmercerized cloth remains uncolored.

The zinc chloride and iodine test consists of soaking the fabric with positive samples of mercerized and unmercerized cloth in the following solution for 3 min.: A solution of 5 grams potassium iodide, 20 cc. water, and 2 grams iodine is mixed with a solution of 25 grams zinc chloride and 12 cc. water. The single solution is allowed to settle and the clear brown liquid is decanted. After steeping the samples in this for 3 min. and washing them, the mercerized sample will remain blue for some time, while the unmercerized sample will quickly lose its color.

In testing the mercerization by the benzopurpurine test, swatches of the unknown sample and of known mercerized and unmercerized cloth are dyed in a dilute bath of this dyestuff with soda ash and soap. The bath is then acidified by adding drop by drop of either hydrochloric acid or titanous chloride, until the unmercerized material just turns blue. The mercerized material remains red at this point.

Silk is, of course, destroyed by strong alkalies since it is a true animal fiber. Hence, such caustic soda solutions as are used in mercerization, which vary in strength up to 40 deg. Tw., would destroy the silk. The usual method is to mercerize the cotton yarn before weaving. Rayons of the viscose or cuprammonium type, according to a chemist who has done much work with rayon, should withstand mercerizing if the rayon yarn is well bound in the fabric and the fabric is not subjected to too great a tension in the wrong direction when wet.

* * *

Cost of Finishing Men's Union Suits

Technical Editor:

What is a fair average cost for finishing operations on men's union suits, heavy cotton ribs? By finishing, I mean from cutting to boxing. What should the percentage of loss be in cutting and seamer's waste on these suits? (5885)

The following prices are paid by one mill making these goods:

Operation	Piece Price per Doz.
Folding	8½c
Pressing	6
Inspecting	17
But. Sew	4¾
But. Mark	2
But. Hole	8½
Seam Leg	8
Tack Front	2¾
Cro. Front	3½
Patching (2)	6
Hanger	3½
Seam Coll.	6
But. Facing	3½
But. Stay	3½
Trimming (neck)	4½
Fell Flap	4
Seaming	24
Cro. Flap	3
Seam Cuff (4)	7½
Cutting Complete	12
Cutting Cuffs	2½

Records over many years of men's union suit production in this mill show conclusively that the average waste (both necessary and unnecessary) in a well regulated cutting department should be 14%. Any cutting room giving a lesser percentage is operated extremely well.

The writer does not know how much waste in ounces should be seamed off the garments, and does not believe it is possible to set any standard rule in this regard. One operator may average only ⅜ in. to ½ in., while another equally efficient operator will seam off as much as ⅝ in. I think that providing an operator follows carefully the lines of her pattern that ½ in. to ⅝ in. seamed off should be satisfactory, more satisfactory than an operator who tries hard to seam off ¼ in. to ⅜ in., and very often does not get both edges of the fabric under the machine needles, thus causing bad work.

* * *

Degreasing Paper Makers' Wool Felts

Technical Editor:

Can you give me a brief outline of the process used for degreasing paper makers' wool felts? (5896)

We believe there is a mistake in the question as asked because we have never heard or seen any woolen paper makers' felts which have been greased or oiled in any way. Consequently there has never been any need for degreasing them. If any oil happens to get on the felt in operation, it is detrimental to its work and oil removers of different kinds are used by the paper mills. What we presume the inquirer means is the process used for degreasing the wool used for the manufacture of woven paper makers' felts.

A brief outline of the process used for this is the same as a brief outline used for scouring any wool for employment in woolen or worsted goods. The particular differences are that one

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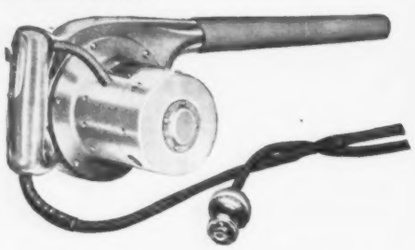

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Correspondence with Readers—Continued

must be more careful that the strength of the alkali and the temperature of the water is less, so that the wool will not be in the least tendered or made harsh. In order to accomplish this result an up-to-date manufacturer making paper makers' woolen felts will more thoroughly open his wool than the average woolen mill; will use more and longer bowls in his scouring machine than ordinarily employed; will keep the temperature of the various liquors in the bowls lower than ordinarily; will have his soap absolutely neutral, and his alkali low in strength, with particular care to have it free from free caustic; and if anything, not scour the wool quite clean. When it comes to the drying of the wool, great care should be taken that it should be dried slowly and at as low a temperature as possible, because causing wool to be brittle at this point is almost as bad as causing brittleness in the scouring operations.

* * *

No Rayon Quality Standards

Editor, TEXTILE WORLD:

Has anything been done yet regarding the standardization of quality, among the producers of rayon in this country?

Putting it another way, can a user of rayon yarn expect perfect skeins when he asks for A quality, and a certain number of defections in B quality, etc. If so, what constitutes fault limits in classification of quality.

This information is important to us because of contractual arrangements involving a guarantee of quality.

We would appreciate your prompt reply.

Very truly yours,

(D155)

To date there has been no movement toward standardization of specifications for A, B and C grades of rayon. Each producer has its own standard for A quality, B quality and C quality and instructs its inspectors along these lines. A customer of any one company becomes accustomed to the meaning of the A quality of that particular producer and detects variations from such standards largely through action of the rayon on machines.

In other words, it is impossible to say that B quality means so many defects throughout the market. Nor is it likely that any attempt will be made in the near future to standardize this phase of rayon production. Individual producers regard it as one of their marks of individuality and we doubt if any movement to effect such standardization would make headway.

You probably know that Committee D-13 of the American Society for Testing Materials has developed tentative specifications for rayon covering methods of identification; tolerances so far as size of yarn, number, twist and direction of twist and strength are concerned; also test methods for these characteristics; and standard for moisture regain. That committee has not, however, attempted to draw up specifications indicating standards for A, B and C grades nor do we believe that any such movement is in prospect.

* * *

Silk Calculations

Technical Editor:

The difference of opinion in the matter you have recently printed under the heading "Calculating Sizes of Thrown Silk," appears to be the difference between theory and practice. The one with its hair-splitting percentage is pure theory, while the other with its wide range of averages is sound practice.

All silk, even in the same bale, varies in size and quality. This variation is due to natural causes which it might be of profit to follow now. Starting from the beginning, the silkworm being of animal life must naturally vary in size and in ability to spin uniform silk. Nothing that grows attains exactitude in size. The silkworm spins a double thread ranging from 800 to 1300 yards in length. This thread is invariably finer at the beginning and at the end than in the middle of the spinning. It is natural that the worm at the start spins a finer thread until he warms up to his work: then the thread becomes heavier, and when he is tiring at the last three or four hundred yards the thread will thin out again. This applies to all silkworms. In addition, each worm, being of different size, spins a different size thread from other silkworms. This difference may not be noticeable until the silk is reeled into a commercial size thread and measured into yards per pound.

Usually five cocoons are reeled to make one end of 13/15 denier size silk. If the cocoon filaments run fine, six cocoons are used, and if the filaments are extra coarse, only four cocoons would be used. Also, it takes a large number of cocoons to make up 1 lb. of 13/15 denier silk. This reeling is tended to by girls who are often very young and who work long hours per day. These girls decide how many cocoons it takes to make a given size thread. Under their working conditions the variation of size is bound to be enlarged.

That is why two sizes are given, such as 13 and 15 denier for a commercial size silk. And the difference in yardage per pound from 13 deniers to 15 deniers is huge; 13 denier gives 343,424 and 15 denier gives 297,634 yards per pound. This is the reason why theoretical figures in raw silk are misleading and should be used only when practical figures are unavailable.

Use Practical Figures

However, many mills have not the time nor the finances to make measuring tests on all the silk they consume. Tests made on warping mills and on looms, including pickage, are uncertain mediums, for the reason that too many hands are employed in making these tests. If one man having nothing else to do could follow the silk through every manufacturing process, some accuracy would be obtained. And after all it is the amount of woven fabric turned off in the mill that fixes the figure for calculating the amount of silk used.

The correct method is to use a base figure, either in drams or yards per pound, for calculating the amount of silk required to make the goods and to use the same figure on the amount of goods manufactured or turned out of the mill. These totals should be kept in adjoining columns, with amount of silk purchased. At inventory or stock-taking time, or especially during a lull in business, a check should be made to find if the base figure is correct. For instance, a mill order calls for 1000 yards of cloth; the silk required is figured and charged against the amount of silk purchased, and when goods are cut off the looms charge the yards woven against the silk figured and purchased. If it requires more silk than that figured to complete the order something is wrong. Either the dramage or yards per pound is wrong, or the manufacturing is wrong. In other words the amount of yards of cloth turned out of the mill is the factor to base all figures on, because after all that is the only factor for which the mill is paid.

Use Average of Six Months

To arrive at a base figure in dramage or yards per pound many things must be considered. The safest plan is to use the averages of the past six months, or longer. However, many mills do not keep averages and figure entirely too low. For instance, take a 3-thread crepe, 13/15 denier with 65/70 turns per inch. Say 13/15 denier averages 14 denier. Multiplying 3-thread by 14 denier gives 42 deniers, which means 3 ends of 14 denier silk, measuring 450 meters in length, would weigh on a denier scale 42 deniers.

To find the dramage divide 42 deniers by 17.44 deniers, as there are 17.44 deniers in 1 dram. 42÷17.44 =2.41 drams. This means that every 1,000 yds. of 3-thread 13/15 denier silk would weigh 2.41 drams. To this should be added loss in throwing and take-up or shortage in twist. A fair allowance for throwster waste is 3%. The take-up in twist is not so easy to determine for many reasons. Hard twist yarns are often thrown when damp, or even wet, to keep intact the twist and this allows more stretch. So many turns per inch requires two or more twistings, which in turn may mean different spinning machines and some machines are in better mechanical condition than others. Also a throwster cannot spin exact turns per inch on such hard twist and is allowed 5% leeway. It will be found that 15% shortening for twist is not too high.

The matter of soap and oil affecting the weight is another uncertain quantity. A throwster can vary this easily. The soaking of silk is usually done by boys who do not always follow out instructions regularly. It is safer to allow 2% for throwster's clearance. This brings the total variation in throwing up to 20%: 15% shortage for twist, 3% waste and 2% clearance. Also to this should be added manufacturing or mill waste.

Work Out a Base Figure

To work out a base figure in dramage take 2.41 drams net and multiply by 1.20, which adds 20% for throwing, making a total of 2.892 or 2.9 per 1000 yds. To work out a base figure for yds. per lb.: 1 denier silk figures 4,464,513 yds. per lb.; 3 thread 13/15 equals 42 denier net, plus 20% for throwing, giving 50.4 denier; 4,464,513 yds. per lb. divided by 50.4 denier equals 88,581 yds. per lb. To this mill waste should be added.

Keeping account of silk required for orders, charged against silk purchased, and charged against the number of yards of fabric turned out of the mill, will show whether the base figure is correct. If a shortage is shown the base figure in drams should be increased and the yards per pound decreased accordingly. Each season brings a new crop of silk and each throwster is striving to increase his profits, so any variation should be carefully followed. Silk purchased thrown invariably shows less yardage per pound than silk thrown by a reliable commission throwster. It is practically impossible to fix a base figure which will cover all lots of silk. Responsible firms figure higher than the size warrants to insure a safe margin, and if a reasonable surplus is shown at stocktaking time this is credited as a mill profit.

We earnestly request Mr. Lewin to continue his remarks on crepes.

HORACE NEILD,
Welwood Paterson Ribbon Factories, Inc.
Paterson, N. J.

Mr. C. Hutton,
TEXTILE WORLD,
Boston, Mass.

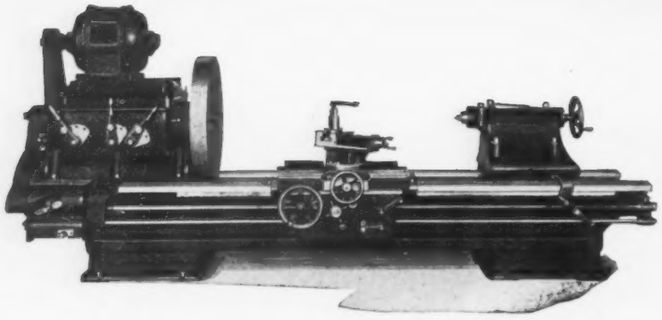
Dear Mr. Hutton.—We are in receipt of your Oct. 20th letter together with enclosures, and thank you kindly for the information given, which gives us exactly what is wanted.

Assuring you of our appreciation, we remain

Yours very truly,
ABINGTON TEXTILE MACHINERY TRUSTEES

International Cotton Federation to Meet in Cairo

WASHINGTON, D. C.—A congress of the International Cotton Federation will be held in Cairo, Egypt, from Jan. 28 to Feb. 7 next. A definite program for the work of the congress has not yet been announced but the Department of Commerce is advised from Cairo that a topic of primary importance will be the alleged mixing of high grade Sakellarides with inferior qualities.



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NEW MACHINERY AND PROCESSES

Improved Electric Drive

For Combination Silk Spinner, Doubler and Twister

*By C. T. Guildford**

In an improved electric drive for the combination spinner, doubler, and twister for silk, recently developed by the Westinghouse Electric & Mfg. Co., the usual cross-head shaft with its pulleys, idlers for the spindle belt, and drive to the feed rolls is replaced by three motors mounted on the end stand to drive each deck separately. The drive is illustrated by the accompanying photograph.

These motors are of the ball-bearing type with grease lubrication. Each of two motors for the lower decks has a shaft extension and spindle-belt pulley at the top. They are mounted on the frame as shown and drive the spindle belts direct. The upper motor has a shaft extension at both top and bottom. The upper extension drives, by spiral gears, the feed rolls; and the lower extension carries the spindle belt pulley, and also a flywheel for the purpose of keeping the second-time spindles running long enough to take up the slack after the first spindles have stopped, to prevent kinking of the yarn on shutdown.

The feed rolls are automatically tripped out of gear by the action of an electromagnet (mounted inside the end stand) which operates when the switch is thrown off or when the voltage falls below a minimum or when the power fails. This permits drawing the slack through the feed rolls without breaking the yarn. The feed rolls then separate and the yarn is drawn through without interference.

The three motors are started and stopped simultaneously with the one switch, which is provided with overload and low voltage features. The low voltage feature operates to stop all three motors when the voltage drops below a minimum value for satisfactory operation or when power fails. This feature is essential because in order that the yarn will not kink when the frame is shut down the switch must be tripped when the motors are running at or near full speed. This, the low voltage feature performs automatically. In this case, the flywheel on the top deck motor runs the second-time spindles long enough after the first-time spindles have stopped to take up the slack.

With this equipment several beneficial features are obtained:

1. A positive twist, as perfect as can be secured with a belt-driven spindle, is obtained, because the feed rolls are driven through a positive gear drive from the same motor shaft that drives the spindle belt.

2. There are no ends down due to shutting down the machine.

3. Practically no kinks are formed due to shutdown.

4. The frame may be shut down and started up again immediately without ends breaking down; or all the frames may be stopped by push button at one point and without operators at the machines, and that without any extra ends down.

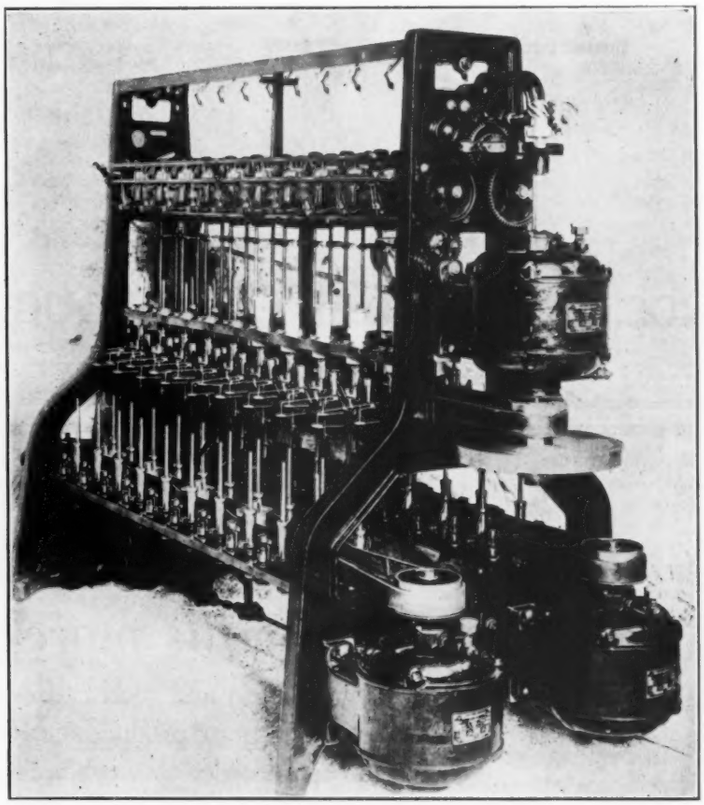
5. Frames may be allowed to run for some time after the operators leave, and be shut down as a group by push button—all without extra ends due to shutdown.

6. The spindle belts do not become oily as when they run over idlers and under the cross head shaft, both of which have to be oiled freely with the usual belt drive. This is due to the fact that with the motor bearings grease-lubricated, no oil is present to leak on to the belts.

7. About 26 ft. of spindle belt is eliminated on the initial installation and on each renewal, and also a saving of about 24 ft. of 2½-in. double belt now required to drive the frame is made.

8. The quarter turns of the spindle belt drive necessary with the usual cross head and belt drive are eliminated, with the resultant saving in power, excess wear of the belt due to the quarter turns, and the elimination of the idlers and their supports.

9. The usual guard for protection against the driving belt is not required, thus improving the appearance and giving more free floor space in the aisle.



Westinghouse Drive for Combination Silk Spinner, Doubler, and Twister

Mercerizing in the Gray

Cotton Cloth Is Treated Before Boiling Out

A new process for mercerizing cotton cloth has recently been patented by F. B. Voegeli of the Textile Auxiliaries, Easton, Pa. It is called the "Frebevoe" method of mercerizing, and is primarily concerned with the complete saturation of cotton goods with a mercerizing solution immediately after they are singed, and before they are desized or boiled out.

Caustic soda of 80 deg. Tw. strength (at 60 deg. F.) is used, and the material is run through after the solution has been heated. Saturation is accomplished almost instantaneously, after which cold water is run over the material until the temperature reaches about 50 deg. F. The 80 deg. Tw. caustic solution is diluted by this washing to a mercerizing strength, and mercerization begins as soon as the temperature has been reduced.

The procedure followed in the treatment of woven goods is to run the cloth, which is stretched during the process, directly from the singer through the hot caustic, and then, after mercerization has proceeded as far as desired, directly into the boiling-out kier. Thus the cloth is not handled from the time it enters the singer until it leaves the kier.

It is claimed that kier boiling time may be shortened considerably because of the amount of the impurities dissolved by the hot, strong caustic solution during the mercerizing. The caustic may be reclaimed from the wash waters by any of the well-known recovery methods.

The underlying principle of this process is to force the mercerizing liquor to penetrate the material instead of waiting for the material to absorb the liquor. This is done by heating the liquor so that its solvent and penetrating properties are increased.

RECENT TEXTILE PATENTS

Braiding machine. 1,600,080. C. Tober, Berlin-Kalshorst, Germany.

Carding machine. 1,600,200. E. Fievet, Lille, France.

Cotton cleaner. 1,599,863. W. E. Baker, Waco, Texas.

Drying and heating, Apparatus for. 1,599,467. W. G. Graves, Cleveland. O. Assignor to The Grasselli Chemical Co., Cleveland, Ohio.

Drying and processing material, Method and apparatus for uniformly. 1,599,797. A. E. Stacey, Jr., Essex Falls, N. J. Assignor to Carrier Engineering Corp., Newark, N. J.

Fires in cotton bales, Apparatus for extinguishing. 1,599,826. W. Lienhard, J. W. Albertson, and J. G. Decker, Mission, Texas.

Hosiery and knit goods, Apparatus for and process of finishing. 1,599,591. T. F. Shatters, Rockford, Ill. Assignor to Burson Knitting Co., Rockford, Ill.

Knitting machine. 1,600,090. W. D. Butz, Norristown, Pa.

Loom for weaving double pile fabrics. 1,600,184. L. Lafond, St. Etienne, France.

Looms, Building bobbin for. 1,599,951. L. H. Brown and G. E. Repass, Knoxville, Tenn. Assignors to Draper Corp., Hopedale, Mass.

Looms, Feeder mechanism for. 1,600,000. O. C. Hinson, J. B. Shelton, and C. C. Dawson, Cramerton, N. C. Assignors to Cramerton Mills, Inc., Cramerton, N. C.

Looms, Feeler mechanism for. 1,599,806. L. H. Brown, Los Angeles, Cal., and G. E. Repass, Knoxville, Tenn. Assignors to Draper Corp., Hopedale, Mass.

Looms, Thread cutting temple for. 1,600,146. M. L. Stone, Lawrence, Mass. Assignor to Draper Corp., Hopedale, Mass.

* General Engineering Dept., Westinghouse Electric & Mfg. Co.

LANE CANVAS TRUCKS

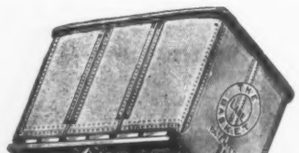


FIG.27

LANE TRUCK.

A light, easy running, smooth carrier, but built for heavy duty work. Lane casters equipped with string guards prevent clogging.

Have stood the exactions of all departments of the Textile industry. One of our latest types to become standardized is the Dye House Truck. All metal galvanized. A solution to the dye house problem.

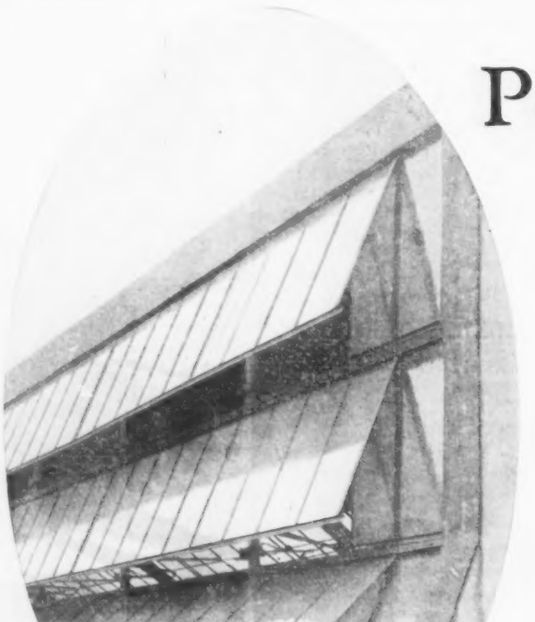
FIG 49

TRUCK & BASKET FRAME.

With slight modifications this cut illustrates the general construction of all Lane truck and basket frames. Lightness, flexibility, wonderful strength secured by this construction.

Write for Catalog No. 90

W. T. LANE & BROS.— Manufacturers —POUGHKEEPSIE, N. Y.



Three lines of Pond Continuous Sash installed in Pond Roof Design. The sash thus used gives shadowless lighting, permits thorough ventilation, and insures weather protection even when open.

POND CONTINUOUS SASH

makes mills more productive

Proper ventilation and good natural lighting are essential to rapid and accurate production. People must have good light and air in order to work well.

Pond Continuous Sash provides both these essential elements with remarkable efficiency. It forms a translucent, rain-proof shelter over a long opening, which may be left open for full ventilation in all weathers.

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MILL NEWS

COTTON

New Construction and Additions

*MORRILLTON, ARK. Two local committees have been appointed to carry out preliminary work in connection with the proposed erection of a cotton mill by Morris & Co., Inc., Groveville, N. J. The committee in charge of plans is composed of J. S. Moore, R. D. Earl, Jr., and M. H. Pierce; the committee in charge of finance is formed of J. S. Moore, W. O. Scroggin and R. D. Earl, Sr.

BANNING, GA. The Banning Cotton Mills are planning the installation of six additional spinning frames and two more spoolers. The Saco-Lowell Shops, Lowell, Mass., have recently installed six three-in. rings, 4-in. gauge ply twister frames of 176 spindles each and two 4½-in. ring, 5½-in. gauge cable twister frames, 124 spindles.

ELBERTON, GA. The Colley Mfg. Co. has purchased a tract of land from George H. McLanahan, just to the rear of its plant on Railroad st., and is preparing to build an addition.

*SHREVEPORT, LA. Satisfactory progress is reported by the directors of the local chamber of commerce in charge of the matter of disposing of the remainder of the $425,000 securities to be sold for the L. H. Gilmer Co., of Philadelphia, to insure the establishment of a branch plant at Shreveport, only about $75,000 of the bonds remaining to be disposed of.

BIDDLEFORD, ME. The Pepperell Mfg. Co. has recently bought 250 cards from the surplus machinery which the Lawrence Mfg. Co. is selling off. These cards are in excellent condition having been run a comparatively short time.

BALTIMORE, MD. The William E. Hooper & Sons Co. has awarded a general contract to C. W. Schmidt, Baltimore, for erection of a one-story, 60 x 72 ft. addition to its mill, reported to cost about $37,000.

CHARLOTTE, N. C. Mercury Mills, Inc., are installing 65 Allis-Chalmers motors equipped with Timken bearings and individual Texrope drive.

*CLIFFSIDE, N. C. The new bleaching plant at the Cliffside Mills is nearing completion.

GREENSBORO, N. C. The Revolution Cotton Mills have awarded contract for a new dye house, kier room, and drying room to the Carolina Construction Co., Greensboro. The new building will cost between $60,000 and $75,000.

GREENSBORO, N. C. The White Oak Cotton Mills are replacing a considerable amount of roving machinery with new equipment purchased from the Fales & Jenks Machine Co., Pawtucket, R. I.

LENOIR, N. C. Steele Cotton Mill Co., manufacturers of cotton yarns, is putting into production its 6,000 new spindles and will operate hereafter with double its former capacity. The new equipment is operated by Allis-Chalmers motors equipped with Timken bearings and the Texrope drive.

* Indicates previous mention of project.

WARE SHOALS, S. C. The Ware Shoals Mfg. Co. is erecting a room adjoining the bleachery to house starching machinery.

YORK, S. C. The Cannon Mfg. Co. will enlarge its local mill by adding 60 ft. to the north end.

Fact and Gossip

MUNFORD, ALA. The Munford Cotton Mills have been purchased by a new company known as the Latsch-Hazlewood Cotton Mills, Inc. Otto Latsch is president; W. P. Hazlewood, vice president, and A. H. Quinn, secretary.

TAFTVILLE, CONN. The Ponemah Mills are running on full time. A new water cooling system is being installed throughout the mills by the Frigidaire Co., New York.

*WILLIMANTIC, CONN. The Quidnick-Windham Mfg. Co., with mills at Willimantic, Conn., and Anthony, R. I., has been given authority to continue operating until goods in process are finished. Sale of real estate at the Rhode Island plant has been authorized and the proceeds will go to the R. I. Hospital Trust Co. to pay off mortgage indebtedness. Walter B. Knight, one of three receivers, has been allowed a service amount of $666. The other receivers William H. Thornley and Charles H. Newell have waived compensation.

EASTHAMPTON, MASS. The Glendale Elastic Fabrics Co. has awarded the contract to Fred T. Ley & Co., Inc., Springfield, Mass., for reinforcement of Nashawannuck dam at Cottage St. The town will pay part of the cost.

*HEBRONVILLE, MASS. The Hebronville Mill of B. B. & R. Knight was not sold at the auction Sept. 23. The only bid made was $7,500 and the auctioneers withdrew the manufacturing property when it was understood New Hampshire and Rhode Island mill interests would be prospective buyers at a private sale. Tenements and boarding houses were sold piecemeal to various buyers.

*LOWELL, MASS. Reuben Dunsford, co-receiver of the Hamilton Mfg. Co., has filed a motion in the Superior Court asking that the decree of the Court of July 2 establishing the receivership, be so modified as to authorize the receivers to continue operation of the company as a going concern. As it now stands, the decree authorizes the receivers to continue operation of the mill until completion of the manufacture of raw materials and stock in process on hand.

*THORNDIKE, MASS. The liquidation sale of the real estate of the Thorndike Co., in separate lots on Sept. 21 brought $172,025, thus making the sale as a unit to Roy E. Cummings, Palmer, Mass., for $150,000 invalid. The two mills brought $25,000 each, a warehouse erected in 1920 at a cost of $176,000 brought $20,000 and the water rights $5,250, all being bid in by Mr. Cummings. The recreation hall was sold for $2,725 and the Thorndike Inn for $4,975, both to Samuel Kaplan, Ware, Mass., while the agent's house, a $25,000 structure, was sold for $6,000, to S. L. Metcalf, Palmer. The 72 mill houses were largely purchased by residents of the village, most of whom are occupying them. Samuel T. Freeman & Co., Philadelphia and Boston, were in charge of the sale.

*UXBRIDGE, MASS. William J. Brady, treasurer of the Waucantuck Mills, purchased six of the 26 mill houses and three building lots for $11,555 at the public auction of the property of the B. B. & R. Knight, Inc., at Hebronville, Mass., on Sept. 23.

UTICA, N. Y. The Utica Steam & Mohawk Valley Cotton Mills have purchased two parcels of land from the City of Utica, according to deeds filed in the County Clerk's office there. The price paid for the two pieces of property was $11,416.57.

GASTONIA, N. C. According to a report, the Priscilla Spinning Co. is contemplating the installation of 5,000 additional spindles.

LAUREL HILL, N. C. The Carolina Fabric Mills, Inc., have been granted a charter to manufacture all kinds of thread and cloth with an authorized capital stock of $200,000, of which $100,000 has been subscribed by Edwin Morgan and E. A. Morgan, of Laurel Hill, and J. D. Phillips, of Laurinburg.

COLUMBIA, S. C. The local plants of the Pacific Mills which have been running on curtailed schedules for the last four months, have resumed full time operations.

WOOL

New Construction and Additions

CAMDEN, ME. The Knox Woolen Co. has recently installed one new set of cards and eight new looms. Full time operations are maintained.

SANFORD, ME. The Goodall Worsted Co. has installed 108 narrow Stafford automatic looms and 48 broad Stafford automatic looms in the Minerva Mills.

*FRANKLIN, MASS. The proposed one-story addition to be erected at the plant of the Hayward Mills is reported to cost about $40,000, with equipment. Work on superstructure will soon begin.

*UXBRIDGE, MASS. The two-story, 50 x 25 ft. addition to the dyehouse of the Davis & Brown Woolen Co. on Mendon St., has been completed by Contractor Edwin C. Erickson and is now being equipped with machinery.

UXBRIDGE, MASS. Concrete piers are being erected in the Mumford River for an addition to the recently completed addition to the Uxbridge Worsted Co., Inc., but work on the superstructure will not go ahead until next spring. All the dry finishing departments will be housed in the new addition in addition to the shipping department.

WORCESTER, MASS. Smith Mills, Inc. are to erect a one-story, frame and cement block addition to the plant they recently acquired at 370 Park Ave. at a cost of $10,200. The work will be done by the day. The business will be removed from Milford, Mass., when remodeling of the plant is completed.

Fact and Gossip

*SOUTH COVENTRY, CONN. William A. King has been appointed temporary ancillary receiver of the Tracy-Elliott Mills, Inc., as result of action brought by the American Wool Stock Co. Mr. King and Wilson D. Trueblood, of New York, were previously named receivers. A hearing will be held at Willimantic Oct. 8.

CAMDEN, ME. The Maine Woolen Mills, Inc., of Camden, have been incorporated to manufacture, sell and deal generally in woolen goods, cotton goods and silks. Capital stock consists of $50,000 preferred, $100 par value and 1,000 shares common of no par value. Zelma M. Dwinal, Camden, is president; Edna M. Robbins, treasurer, and Charlotte C. Dillingham, Rockport, a director.

CLINTON, MASS. The wool department of the Bigelow-Hartford Carpet Co. shut down on Sept. 23 until Oct. 4. The worsted departments will continue to operate on short time.

LOWELL, MASS. The mills of the United States Bunting Co. and the Ames Worsted Co. are running on full time and full capacity as they have been for a long time past.

MILLBURY, MASS. The Millbury Spinning Co., Inc., a branch of the Uxbridge (Mass.) Worsted Co., Inc., has started night operation.

*MONSON, MASS. Henry Corwin, New York, who purchased the old branch mill of the W. B. Dunn Co., Providence, R. I., recently, has been in town looking after preparations for the reopening of the plant. Joseph H. Loudon, former manager of the mill for the Monson Associates, Inc., is in charge of affairs.

PITTSFIELD, MASS. The W. E. Tillotson Mfg. Co. has sold the old Robbins & Kellogg plant on Fourth St., consisting of two buildings and three-fourths of an acre of land to England Bros., who will use it for storage, for approximately $35,000. The property had been idle since the lease of the General Electric Co. expired.

EDMONTON, ALTA., CAN. Opening of a woolen mill at Edmonton is proposed by F. H. Copp, of Port Elgin, N. B., according to a communication just received by Mayor Blatchford. Formation of a joint stock company would be necessary and steps have already been taken to look into the project.

KNIT

New Construction and Additions

*CHICAGO, ILL. The Climax Knitting Mills, Inc., 430 S. Greene St., organized early this year with capital of $12,500, has an equipment of 15 knitting machines, eight sewing machines, two circular jacquard machines, ore winder and one stretcher, for the production of men's, women's and children's sweaters, caps and cardigans. S. W. Greenball

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—how little "cling-ability" the cotton fibres have when there's excess moisture in the air!

—how fuzzy and brittle the yarn becomes when the humidity takes a drop!

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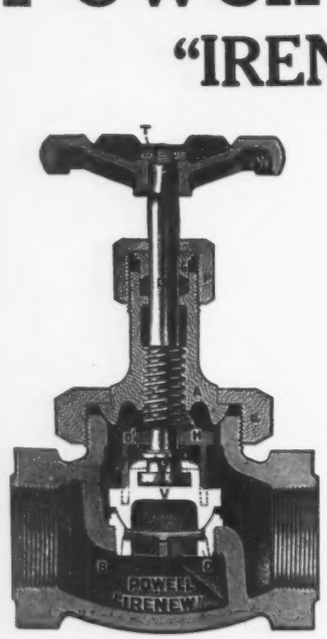
DETROIT, Ford Building
CINCINNATI, Traction Building
ATLANTA, Candler Building.
PHOENIX, ARIZ., Heard Building
NEW ORLEANS, 344 Camp Street
HOUSTON, TEXAS, 1011-13 Electric Building
DALLAS, TEXAS, 2001 Magnolia Building
DENVER, 444 Seventeenth Street
SALT LAKE CITY, 405-6 Kearns Building
SAN FRANCISCO, Sheldon Building
LOS ANGELES, 404-406 Central Building
PORTLAND, ORE., 805 Gasco Building
SEATTLE, L. C. Smith Building
HAVANA, CUBA, Calle de Aguiar 104
SAN JUAN, PORTO RICO, Royal Bank Building
HONOLULU, H. T., Castle & Cook Building

Powell Valves
"IRENEW"



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Nickel
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Joined Once
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Crescent Belt Fasteners make a permanent joining which will 'stay put' for the life of the belt. No holes are punched in the belt. The prongs of Crescent Rivets find their way through the belt without cutting or injuring the power-carrying lengthwise fibres. The belt ends are forced tightly together and compressed which eliminates raveling and fraying. No parts subject to wear. Write for the Story of Proper Belt Joining. Crescent Belt Fastener Co., 247 Park Ave., New York, N. Y.

Write for Catalogue

CRESCENT BELT FASTENERS

Mill News—Continued

is president; Henry Sugar, secretary and treasurer. They sell to jobbers and retailers.

MERIDIAN, MISS. The Meridian Knitting Mills, started some time ago by Alden McLellan, 3d, on the production of cotton hosiery, have 50 knitting machines and necessary finishing equipment. Cotton yarns in 12s, 18s and 40s are bought. Product is sold direct to jobbers.

*COHOES, N. Y. The partnership formed by Joseph Riberdy and Paul Derocher about a year ago for the purpose of manufacturing knitted rayon fabrics, has been dissolved and Mr. Derocher is now operating the machinery, in addition to which he has started the cutting and finishing of women's underwear. The finished garments are sold direct to consumer.

OSWEGO, N. Y. At a meeting of directors of the Oswego Rayon Corp. it was voted to double the output of the plant. Orders will be placed at once for additional machinery and equipment, and increased floor space will be provided for. Expansion is made necessary by the demand for the company's products.

SHELBY, N. C. The Janet Hosiery Mills are building a 50 x 70 ft. addition to their plant.

*PORTLAND, ORE. The Jantzen Knitting Mills have awarded a general contract to Wayne L. Mills, Linnton, Ore., for the erection of their proposed one-story addition at Nineteenth and East Glisan Sts., 100 x 100 ft., to cost about $17,000.

*PHILADELPHIA, PA. Monroe Hosiery Mills, a newly organized full-fashioned hosiery manufacturing concern, will start production about Oct. 1, with an initial equipment of 12 full-fashioned and supplementary machinery. Their product will be sold direct. This concern was recently incorporated upon an application made by H. A. Feldgoise, S. E. Freedman and Robias Goldenberg and has erected a brick and steel building 100 x 125 ft.

*PHILADELPHIA, PA. Co-Ed Knitting Mills, 5th and Courtland Sts., manufacturers of ladies' full-fashioned silk hosiery, having completed the erection of their new addition at Fairhill and Courtland Sts., have more than doubled their former capacity. They now have 16 full-fashioned machines, 39 gauge and 23 new full-fashioned machines of 42 gauge, a total of 39 machines. They have also increased their supplementary equipment, now having 10 loopers, 10 seamers and 4 winders. It is also announced that in the near future, probably at the first of the year, a change in the company name will be made, after the business has been reincorporated, when it will be called Co-Ed Silk Hosiery Mills. New officers will be chosen for the new corporation. Harry Bachove, treasurer of the Co-Ed Knitting Mills, will be president and treasurer of the new company and George F. Lang, who was secretary and superintendent of the Co-Ed Knitting Mills, will be vice-president and secretary of the new company. A. H. West, president of the Co-Ed Knitting Mills, has resigned and is no longer connected with this concern. Harry Bachove will also do the buying.

*CHASE CITY, VA. The new branch of the S. S. Miller Hosiery Mill, Reading, Pa., to be started here about Oct. 1 will be known as the Chase City Hosiery Mill. It will have an initial equipment of 100 latch needle knitting machines which will be transferred from the Gibraltar, Pa., mill of the company which will be discontinued. Electric power for the new plant will be bought.

*WYTHEVILLE, VA. The building of the Inspiration Hosiery Mills is nearing completion and it is expected to require about six weeks to install the machinery.

HASTINGS, ONT., CANADA. Lavoie Knitters, Ltd., which recently purchased a three-story and basement building in Hastings, have remodeled it and removed their equipment from Peterboro to the new location. Additional machinery has also been installed, bringing the total up to 11 English X.L. machines, seven Jenckes footers, two 18-spindle winders, 14 ribbers, six flat knitting machines, one jersey cloth machine, two brushing machines, five loopes and seven sewing machines.

* Indicates previous mention of project.

Fact and Gossip

LOWELL, MASS. The mills of the Lawrence Mfg. Co. are operating on about the same schedule as they have for some time past. The new management is making no radical changes at present. As previously reported there is a surplus of about 40,000 spindles of balanced spinning machinery which is to be sold and thus reduce the yarn spinning capacity to balance the knitting.

*NEWARK, N. J. J. Herbert Reid, receiver for the Smartsilk Hosiery Mills, Inc., has been authorized by Vice Chancellor James F. Fielder to sell the property and machinery at public auction.

AMSTERDAM, N. Y. John K. Stewart & Sons, which started removal of some of their machinery to Pine Bluff, Ark., several years ago, where it is now operated by the Arkansas Textile Co., Inc., are liquidating the affairs of the New York corporation. The northern plant has been closed down for some time.

NEW YORK, N. Y. The Boulevard Textile Corp. has filed schedules in bankruptcy showing liabilities of $125,-911 and assets of $327,284. The main items in the latter are machinery and fixtures, invoiced at $300,000.

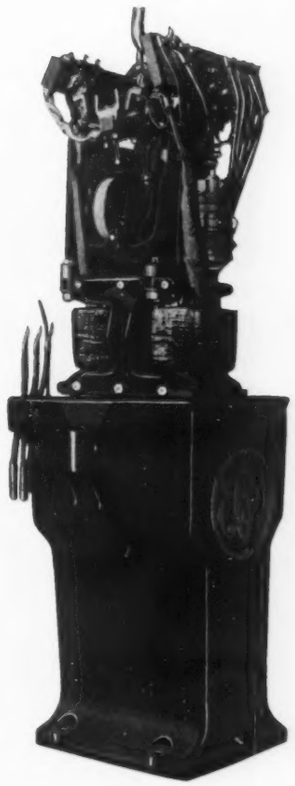
STILLWATER, N. Y. The Stillwater Knitting Co. has orders ahead which insure capacity operations until the end of the year.

PHILADELPHIA, PA. A charter has been granted to a company called Frankford Knitting Mills, Inc., to manufacture, buy and sell and deal in hosiery, incorporators being G. D. Weiss, attorney, and others. Location of this firm will be announced in the near future.

PHILADELPHIA, PA. Application for a charter of incorporation will be made by attorney for D. Seidmann's Sons, Randolph and Jefferson Sts., manufacturers of knitted ties, Oct. 21. Charter requested includes the manufacture of fringes as well as ties, being in charge of Clinton O. Mayer, solicitor, 1332 Bankers Trust Bldg.

MONTREAL, QUE., CANADA. The Grover Knitting Mills have moved from 652 St. Lawrence Blvd. to 52 Nazareth St., Montreal.

AUTOMATIC COMPENSATORS



The EC&M Automatic Compensator for starting A.C. motors, is oil-immersed and the case is sealed. This makes it suitable for use in dusty or gaseous places and assures long life with uninterrupted service.

This Compensator is pictured above. To the right is shown the method of lifting the working parts out of the oil.

The EC&M Automatic Compensator can be push-button operated or it can be controlled from such devices as float switches, pressure regulators, etc. It accelerates the motor and the driven machinery in an intelligent manner because it works on the principle of **Current Limit Acceleration.**

When the control circuit is closed, the Compensator throws to the starting position and the motor is connected to the power line at a reduced voltage. After the motor has speeded up to a point where it is safe to throw it across the line, the Compensator throws to the running position and the motor is then on full line voltage.

EC&M Automatic Compensators can be interlocked with each other so that motors can be started and stopped automatically in any required sequence.

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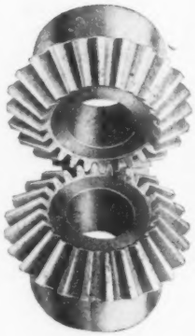

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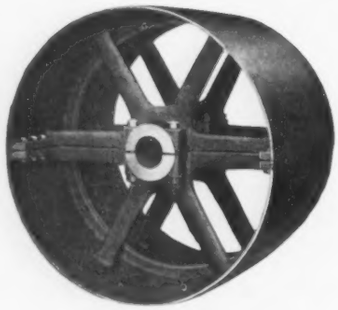

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Give us horse-power, speed and nature of the work.

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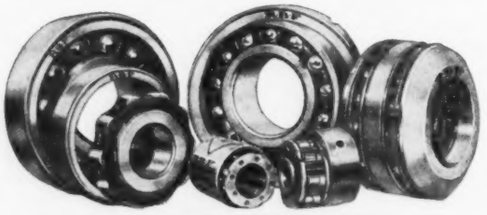
PHILADELPHIA, PA.

See also CONSOLIDATED TEXTILE CATALOG

Machine Tools and Injectors



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Mill News—Continued

SILK

New Construction and Additions

*ELBERTON, GA. The Seaboard Silk Mills have awarded contract for construction of their main mill building, a two-story, 70 x 370 ft. structure, to A. K. Adams Construction Co., Atlanta. It is to be completed within 70 days. Contract for building the mill village houses has been let to the Fisk-Carter Construction Co., Greenville, S. C., and is to be completed within 90 days. As previously reported, the Susquehanna Silk Mills, New York, are associated with the interests which promoted the new project. It is understood that the Georgia Railway & Power Co. will supply electric power to run the mills. Robert & Co., Atlanta, are the engineers in charge.

NEW BEDFORD, MASS. The National Spun Silk Co. has recently installed 200 Crompton & Knowles looms, the majority of which are now in operation at the plant.

NEWTON UPPER FALLS, MASS. The New England Spun Silk Corp., has awarded a general contract to Wm. T. Reed Co., Boston, for alterations to its storehouse at 38 Oak St. The work will cost $10,000.

WORCESTER, MASS. The Worcester Silk Mills Corp. has been incorporated with a capital stock of $250,000 preferred stock and 5000 shares of common stock without par value to manufacture silk fabrics. It has leased the former weave room of the Mills Belt Co. at 150 Fremont St. and will install 100 looms at the outset. The officers of the corporation are: President, Eric Muelberger, president of E. Muelberger & Associates, Ltd., New York, selling agents, who will also be general manager and sales manager; vice president and clerk, Rufus S. Frost; treasurer, Harlan T. Pierpont; directors, the officers and Theodore T. Ellis and Frank P. Knowles, Auburn, Mass.

BINGHAMTON, N. Y. The Binghamton Silk Mfg. Corp. has been organized by G. Barschdorf, superintendent of the Cedar Cliff Silk Co., Frederick St., and associates, to manufacture broad silks. The new company is capitalized at $10,000. The other incorporators are W. R. Holden and W. Mailer.

GLENS FALLS, N. Y. The Champlain Silk Mills have completed installation of a number of filling machines which will allow a large increase in production at the Haskell Ave. plant.

*NORWICH, N. Y. As reported last week, H. H. Kurkjian, head of H. H. Kurkjian, Inc., Greene, N. Y., has leased space in the Benedict building in Norwich for a branch mill. Mr. Kurkjian bought the Greene Ribbon Mills last July and will operate both plants under the name H. H. Kurkjian, Inc. The new branch will be equipped at the start with about 22 ribbon looms, three warping, two winding and 16 quilling machines, this number to be doubled before long, according to present plans.

*VALLEY FALLS, R. I. The Concordia Mfg. Co., North Adams, Mass., advises TEXTILE ADVANCE NEWS that new machinery and equipment are now being installed in the building at Valley Falls formerly occupied by the Hamlet Textile Co., and where approximately 8,000 sq. ft. of floor space has been leased. The Concordia company expects to have this new plant ready for silk and rayon yarn converting and the manufacture of its well-known embroidery yarn during the early part of October. It is the intention of the management to install some looms later on.

* Indicates previous mention of project.

Fact and Gossip

PATERSON, N. J. The H. W. Silk Co., Inc., recently formed with a capital of $50,000, to manufacture broad silks, will be represented by George Surosky, 45 Church St., Paterson. The incorporators are Saul Lippman, Jack Stern and Charles Fronzuto.

OGDENSBURG, N. Y. Efforts are being made to reopen the plant of the Manhattan Silk Co. at Ogdensburg which was recently closed down.

DYE, BLEACH AND FINISH

New Construction and Additions

*FISKDALE, MASS. Among the improvements contemplated by Goldin Bros., Inc., new owners of the No. 1 mill of the former Fiskdale Finishing Co. is the construction of a new dam at Long pond which enters the Quinebaug river at a cost of $25,000 or more. The old dam was carried away by high water in 1918.

WILKINSONVILLE, MASS. The Anco Finishing Co. which has been reorganized by W. H. Clapham, vice president of the firm, is now operating at full capacity. The volume of business has increased 70% since August, according to an announcement made by Mr. Clapham. The plant has been thoroughly overhauled, some new machinery installed and all necessary arrangements made for the finishing of a wide variety of fine goods which the company expects to handle in the near future. The present rate of production is 500,000 yds. weekly and this will be increased to 750,000 yds. before the end of next month.

PHILADELPHIA, PA. Contract for the erection of a new manufacturing building on Lippincott St., west of Second, which is to cost $60,000, has been awarded to H. M. Wilson Co., People's Bank Bldg., by J. R. Foster & Sons, dyers of worsted and woolen yarns, raw stock and fabrics.

*EAST GREENWICH, R. I. Work is progressing rapidly on the new dye and boiler house being built for A. H. Esten. The general contractors Locke & Thomas, Inc., New Bedford, Mass., have awarded the following subcontracts: Stone, Sullivan Granite & Construction Co., New Bedford; painting, Fuller & Barker, New Bedford; doors & windows, C. H. Borchers, Salem, N. H.; roofing and sheet metal work, Farber Roofing & Sheet Metal Co., Pawtucket; plumbing, Henry J. Lyons, So. Boston, Mass.; iron, Brayton Foundry Co., Riverpoint; and the structural steel, John E. Cox, Fall River, Mass.

Fact and Gossip

*WORCESTER, MASS. The first meeting of the creditors of the Peter Wood Dyeing Co., adjudicated bankrupt on Sept. 10, will be held before the referee in bankruptcy on Sept. 30 when a trustee will be appointed.

Success

TO what do you ascribe your success, Mr. Knit Goods Manufacturer?

If this stock phrase of the interviewer were asked Torrington Needle users — we believe they would give some of the credit to these good needles.

The red box with the green label

The TORRINGTON COMPANY
Torrington, Conn., U. S. A.

BRANCHES:

THE TORRINGTON COMPANY, CHERRY AND JUNIPER STS., PHILADELPHIA
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TORRINGTON, CONN.
MANCHESTER, N. H.
COVENTRY, ENGLAND
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See also CONSOLIDATED TEXTILE CATALOG

In step with the market

-:-

B–Vertical Floating Striping Machine.

-:-

B–Vertical Floating Striper and Dot Machine.

-:-

* B–6 Machine.

-:-

* B–7 Machine.

-:-

THESE machines offer a variety of styles and colors to meet all demands.

Simple patterns may be produced on these machines as well as the more comprehensive styles containing a multiplicity of colors, checks, dots, etc., incorporating in one machine the advantages of all these desirable features.

*** Models B–6 and B–7.**

These machines are built with six and seven yarn feeding fingers, respectively. These machines are of floating vertical stripe design.

The vertical stripes are produced by groups of knitting needles knitting with one or two yarns used for plaiting, thus producing a perfectly clear and positive vertical stripe of a greater width than can be produced with reverse plaiting needles, particularly when using worsteds, or soft yarns on coarser gauges.

The vertical stripes can be located throughout the circumference of the stocking as desired, by the use of jacks under the needles to produce the vertical stripe of the width desired.

These machines will produce repeated horizontal stripe patterns of any design up to 48 courses, if two or more course width stripes are desired. Repeated patterns up to 24 courses can be made if single course stripes are incorporated in the pattern.

The vertical striping attachment on these machines is so arranged that when making plaids or checked patterns small squares can be inserted in the middle of the check or vertical stripe.

The above machines can be set up for either men's half hose or ladies' hose, if desired.

Established 1865

SCOTT & WILLIAMS

Incorporated

366 Broadway New York

See also CONSOLIDATED TEXTILE CATALOG

KNIT GOODS

Hosiery Deliveries Wanted by Trade

Buyers Asking for Prompt Shipments, but Finding Them Difficult to Secure

It is not surprising that buyers are finding it difficult to secure hosiery for prompt delivery. Their policy of delay in operating has been carried to a point where they are in need of goods that cannot be supplied as quickly as they now desire. This does not mean there is any famine in hosiery nor is there likely to be but at the same time the things which are wanted are wanted badly and usually manufacturers have not operated their plants on hopes but on specific orders. Therefore there is no surplus to draw upon where merchandise is in demand to fill daily needs.

Spring Business Drags

Comparatively little has been done for next spring on general lines of staple goods. Orders have been placed by buyers from the far West on infants' and children's goods but for the most part operators are simply making inquiries on the possibilities of another season and as long as they have not placed their entire requirements for fall it is not to be expected they will operate with any freedom for another season. In certain cases sellers have discouraged the placing of orders ahead until fall requirements are supplied.

Trends in Fancies

There are certain tendencies in men's fancy half hose which may be significant or not. One of these tendencies is toward vertical stripes instead of horizontal and there are those who predict the next step will be to clocks and back finally to staples. There does not seem to be any good reason, however, to predict that fancies are to go out of use, but on the other hand there is much to warrant the prediction that with new styles being constantly shown there will be a continuous demand. The general use of fancies by the consuming public is never going to be accomplished for there will always be those whose modest tastes will prevent their adoption, but nothing on the horizon indicates their passing, although changes in styles will undoubtedly make for somewhat different classes of merchandise.

Full-Fashioned Demand Continues

Every indication points to a continued demand and firm prices on full fashioned merchandise. A good many feel the silk market is too high and consequently are taking a leaf out of the jobbers' and retailers' books and are buying raw material only from

(*Continued on page 99*)

Will Spring Underwear Stay Firm?

Belief That Concessions Will Not Increase Buyers' Operations for Coming Season

A QUESTION which is agitating a good many underwear sellers at the present time has to do with the effect of lower cotton prices and irregularity in the staple on prices for spring underwear. There are those who fear that unless a material change in raw cotton prices upward is announced there will be a disposition on the part of certain weak sisters to cut quotations. Whether this will avail them anything it is hard to determine. The majority of selling agents feel that price concessions will not increase business for spring. On the other hand, they argue that the show of any such weakness on the part of the manufacturer or of the selling market would do more to discourage buyers than to encourage them and that conditions would be made worse rather than improved by an evidence of instability.

Buyers Lack Confidence

Unless there is some belief in the minds of the buyer that the market is going to be stabilized and that the future does not hold in store a depreciation in the value of merchandise, operations for spring are going to be delayed. This does not mean that business has not already been placed for certain lines are in fair condition for the coming season. The great bulk of ordering, however, has not been done and buyers are fearful that they may repeat the experience of the fall season if they begin to operate at the present time. With many requirements for fall have not been entirely covered and it is only natural that they should adopt a hesitant attitude on another season when their operations for the current selling period have not been concluded. But the most potent influence tending to cause postponement of operations is the fear that after they have bought, their competitors may own merchandise at a lower figure. There is nothing that tends more to the development of the hand-to-mouth practices of the buyer than uncertainty as to prices.

A Possible Offset

There is just one influence that may react upon the buyer, influencing him to anticipate. The advent of cold fall weather may develop such a demand for heavy-weight merchandise that the buyer may undergo a most uncomfortable experience in securing the merchandise he needs for his clientele. There are certain lines of goods that are practically sold up for the season. Others are behind hand in delivery and on still others prompt shipments are impossible. This condition makes for more or less apprehension on the part of the buyer and it may have its influence on his operations for spring. If the healthy statistical position of heavy-weight merchandise is intensified within the next month and the demand is sufficient to cause possible advances on late orders, the buyer may conclude not to take such chances again and may change his attitude toward spring purchases very materially. For this reason conservative members of the trade feel it would be most unwise to make any price announcements at the present time other than have already been made and feel that the policy of wisdom would be to stand pat and do nothing. Forcing the buyer is not possible, in the opinion of the majority, and might lead to most unsatisfactory results.

Athletic Goods Favored

Satisfactory business has been reported this week on athletic underwear. A number of buyers have been in and have placed sizable orders for spring. Demand is almost exclusively for union suits but here and there a call for athletic knit shirts and nainsook drawers is evidenced. While these spasmodic orders are a matter of comment they are not regarded as indicating any tendency and compared with the total do not aggregate a very large volume.

Sweater Orders Plentiful

Will Present Demand Make Up for Early Delays by Buyers?

More orders are being placed on sweaters than the majority of mills can take care of. This statement, which is heard very frequently in the selling market, should not be considered alone but in connection with the absence of early business. It is the general feeling that in spite of the current activity it will be a difficult matter to make up for the early inaction of buyers. Of course it will mean that a good many operators will not be able to get what they want because production has slackened very materially and goods cannot be made over night. Substitutes will be taken however and there will be no general scarcity.

Demand for Shakers

If any tendency is to be noted in the demand for sweaters it is toward shakers. These seem to have a prominent place in the great majority of orders that are being placed today. A good many agents are sold ahead as far as they care to go on these lines and cannot offer deliveries that appeal to the buyer. Crickets also form a comparatively important part of current business but outside of these two types the market is more or less undecided as to popularity and buyers are not able to determine as to their final needs on the great majority of styles.

While no positive action has been taken looking toward a restriction of styles in the sweater market, practically all agents agree such a move would be desirable and of service not only to manufacturers but to buyers as well. They believe that agents could get together and restrict types of merchandise that they would offer, with resulting benefit to themselves and to their clientele. It needs someone, however, to start the ball rolling and it remains to be seen who will be the leader in this effort.

Hosiery Comments

J. P. Voorhees, the well-known hosiery selling agent who has been located for a number of years at 90-92 Franklin Street, will move on or about the first of the year to 49 Leonard Street, where he will occupy more commodious quarters.

* * *

The Chicago office of Jacob & Schey will be opened Oct. 1 and will be in charge of J. B. Whitelock, formerly connected with J. P. Voorhees. The announcement of this office was made in these columns a few weeks ago.

* * *

While the majority of hosiery selling agents do not see any general tendency toward vertical stripes, they admit more of these are selling as well as plaids and diamond effects. Something new is being brought out continuously in this type of merchandise and it is the new thing which is popular with the trade.

* * *

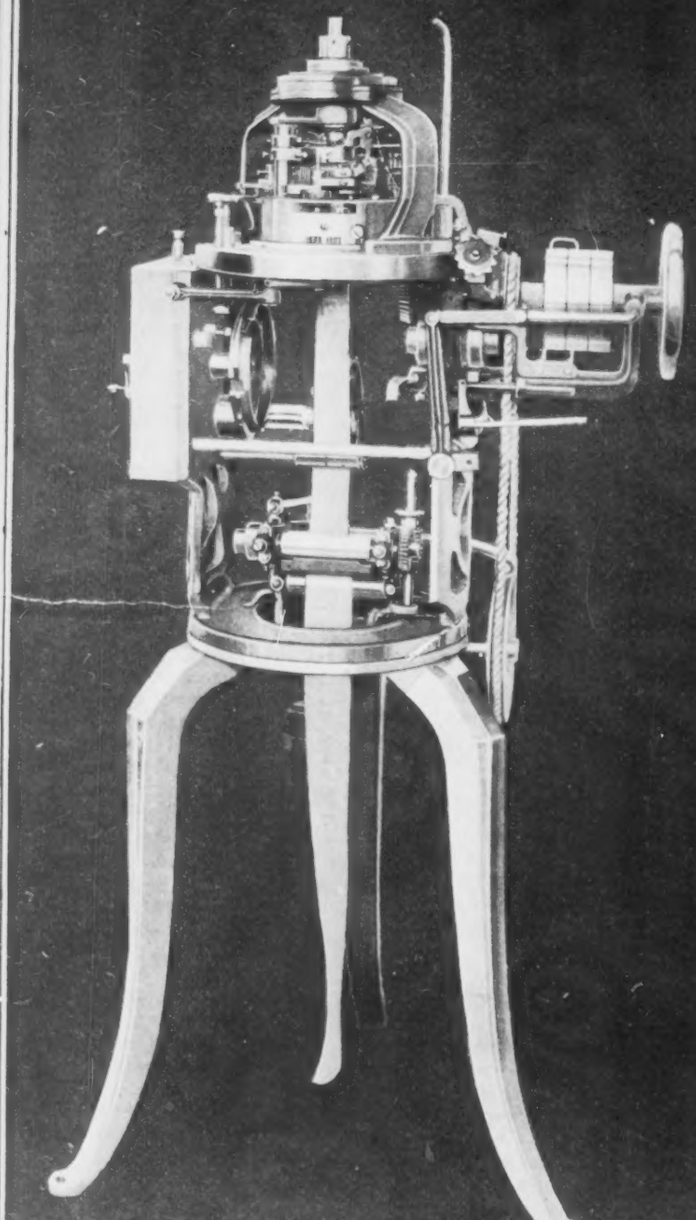
Demand for full length children's ribs is regarded as merely a seasonal development and not indicative of any style change away from fancies. With cool weather mothers naturally desire to have their children's knees covered, whether theirs are or not, but 7-8 goods with fancy tops are not likely to suffer when the season for such goods returns.

* * *

Women's R. I. stockings in rayon and silk as well as cotton, seem to have taken on a new lease of life compared with the inactivity which has characterized this merchandise for several months.

* * *

Hosiery manufacturers are watching the mercerized yarn market with



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We have issued a new edition of the complete and informative book, "The Science of Knitting." Price $2.00.

WILDMAN CIRCULAR RIBBER

Knit Goods—Continued

considerable interest and are wondering whether the decline in the cotton market will cause any of the mercerizers to bid for business to an extent that will cause any irregularity in prices. So far it is said prices remain uniform, but a good many large orders are said to have been taken before uniform prices were established.

Hosiery Deliveries Wanted

(*Continued from page 97*)

hand to mouth. They declare they do not see any chance of serious declines in raw silk and also admit that the possibilities of an advance are not to be disregarded. Nevertheless they do not care to stock up on the present level and are proceeding as cautiously as possible. A general tendency toward chiffons is admitted in all quarters. Possible exception to this statement may be made in the case of houses dealing with the country trade where heavier weights are being taken to a certain degree, but the all-year-round demand for chiffons is continuing the feature of the full fashioned market. It used to be said that chiffons would not be generally popular in summer because of the visible effect of perspiration, but it seems to make little difference today with the demand for this class of goods whether they are to go into consumption during the summer or winter months.

It is admitted the manufacture of chiffon hosiery is more or less hazardous because of the amount of seconds necessarily produced. No definite figure can be given as to the average amount of seconds turned out by the general run of manufacturers but certainly those who have not had a long experience or up-to-date equipment are having to reckon on a very appreciable amount that must be sold below the price for perfect goods.

Children's Goods Better

Details are being received on the majority of infants' hosiery orders. Of course there are those who have not yet given these details, especially on large-sized transactions. City buyers are the slowest to complete their requirements, but this is nothing new and it is not a matter for apprehension that these buyers have for the most part still to place the most of their business. Talk in certain quarters to the effect that misses' 7-8 goods with fancy tops have passed out of reckoning is regarded as without basis in fact. Agents report that their men on the road are sending in good business, particularly from the South. They characterize such statements as emanating from those whose merchandise would not sell under any circumstances and declare that well-styled goods are in demand and strong in price. Nevertheless it is reported here and there that some exceedingly low prices have been named by agents on rayon 7-8 goods, in fact, a figure was heard this week that is lower than the majority of cotton goods lines. The only explanation given is that it is a case of cleaning up stock which means a serious loss for the mill involved. The slight improvement in demand for misses' full length stockings is nothing to be wondered at in view of the small early business on this class of staples. It would seem as though buyers had forgotten that there was to be any cold weather and with the first touch of snappy days realized they must provide for a certain amount of demand on this class of merchandise.

John H. Leich to Retire

John H. Leich, sweater and underwear selling agent, 377 Broadway, New York, will retire Jan. 1, and will liquidate the business of his company. Practically all of his salesforce will become connected with Herman Heller, who is opening a selling office at 93 Worth Street, where he will handle the product of certain sweater mills formerly sold through Clift & Goodrich.

Underwear Production Up in August

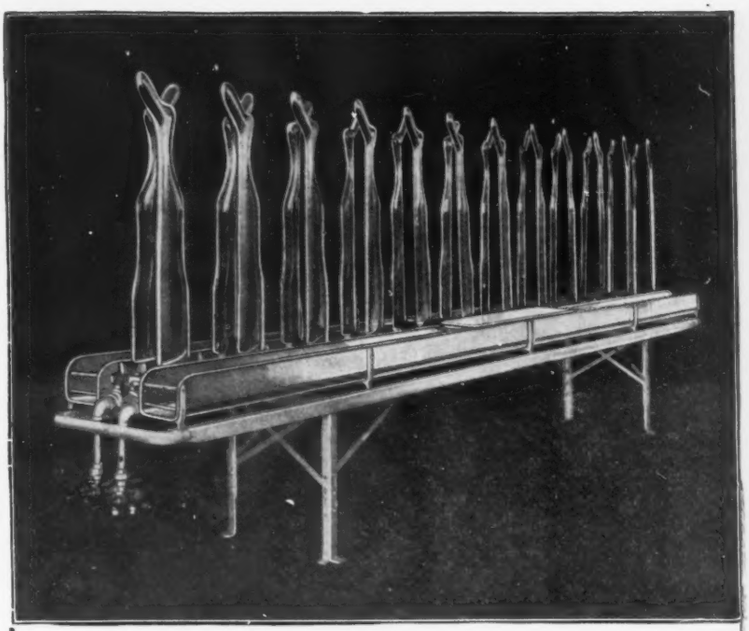
WASHINGTON, D. C.—Knit underwear production gained in August and there was also a large increase in new orders and shipments during the month. The new orders of 150 establishments reporting to the Department of Commerce aggregated 958,682 doz., as compared to 584,578 in July; shipments totaled 1,117,024 doz. against 871,887, and unfilled orders at the end of the month amounted to 1,942,977 as compared to 2,102,319 doz. at the end of July.

Army Quartermaster Asks Bids on Sheeting

PHILADELPHIA.—Depot Quartermaster, U. S. Army, will receive proposals Oct. 15, at 11 A. M. for supplying 148,283 yds., unbleached sheeting, 54-in., to conform with specifications 415-2-1301. It was also announced the Samoset Cotton Mills, Talladega, Ala., and the Lane Cotton Mills Co., New Orleans, received award for furnishing 517,946 yds., of unshrunk blue denim, on which bids were recently opened. Samoset Cotton Mills received contract for 200,000 yds., on which they quoted 14.88c per yd., net. Lane Cotton Mills, received contract for remaining 317,946 yds., their bid being 15.5c per yd., delivery to start at once and to be completed by Dec. 31.

MUNFORD, ALA. The Southern Mills Corp., Oxford, Ala., has acquired the Munford Cotton Mills, which, according to latest report, have an equipment of 2,496 ring spindles.

PHILLIPSDALE, R. I. The Priscilla Braid Co., Central Falls, R. I., has purchased from the Sayles Finishing Plants, Inc., the plant at Phillipsdale formerly occupied by the Glenlyon Yarn Dye Works, and will start removal of its equipment to the newly acquired building where there is ample room for expansion.



Paramount Progress

The increasing number of Paramount Users establishes more firmly than ever before, the Superiority and Efficiency of the PARAMOUNT METHOD for correct hosiery drying and finishing. One of the important factors in determining Paramount Supremacy is the constant improvement of Paramount Equipment to more effectively fill the requirements of discriminating hosiery manufacturers.

We are now in a position to furnish on either a sale or rental basis, the NEW PARAMOUNT ALL-METAL TABLE with ANGLE-BASE ATTACHMENTS, plus an improved and different principle in Low Pressure Steam operation.

This NEW TABLE is made entirely of metal and the troughs are constructed from smooth, highly-polished aluminum. Aluminum is non-absorbent and tarnish-proof, which permits changing from colored to bleached goods by simply wiping out the troughs. All edges are rounded and there are no corners or pockets to collect dirt. The possibility of THREAD PULLING is positively eliminated.

The ANGLE-BASE ATTACHMENT allows the operative to see both sides of the stocking without moving the form. It facilitates and simplifies both boarding and stripping and promotes Quality Work.

The new Circulating System provides for uniform heating at all times, with unusually low steam pressure.

Upon request, we will be pleased to furnish further particulars.

PARAMOUNT TEXTILE MACHINERY CO.

See also CONSOLIDATED TEXTILE CATALOG

Hunter Building

Market and Madison Streets, Chicago, Ill.

NEW AND NOVEL DESIGNS KNITTED THROUGHOUT WITH "BANNER" DIAGONAL MACHINES

THESE patterns are not printed on the outside; they are actually knit into the fabric by our patented reversed plaiting method, as shown by the illustration.

Patterns like the above and many others are easily made by our "Banner" Diagonal Stripe machine equipped with Horizontal and Vertical attachments.

See also CONSOLIDATED TEXTILE CATALOG

HEMPHILL COMPANY
MAIN OFFICE AND FACTORY
PAWTUCKET RHODE ISLAND

New York Sales and Show Rooms
93 Worth Street, New York

Southern Office
James Bldg., Chattanooga, Tenn.

Philadelphia Sales and Show Rooms
Colonial Trust Bldg., 13th and Market Sts.

Research in England

(*Continued from page 62*)

depend in a complicated manner on the amount of size present, and much additional laboratory investigation of the mechanical properties of sized yarns is required before such experiments can be fully interpreted. The general results of the weaving tests is to show that for the plain cloth employed, over-sizing is more likely than under-sizing to give rise to an excessive rate of breakage during weaving.

In heavy sizing the problem has been to account for differences of as much as 1 lb. in 12 in the weight of pieces of cloth woven from the same warp. It has been shown that comparatively small fluctuations in the size concentration are sufficient to control the amount of paste taken up by the warp to an extent sufficient to account fully and accurately for the irregularity of the piece weight. A close study of the usual practice of diluting the size in the sow box by steam has revealed the chief sources of the trouble and the reason for the production of heavy pieces. An improved method of heating the size by steam is therefore being worked out.

Value of Acid in Bailing

Examination of the effects of treating cotton with water or dilute acids has revealed three methods of determining the efficiency of removal of the soluble constituents during technical steeping, and therefore indirectly of measuring the mechanical efficiency of the processes. They are: (a) ash content and ash alkalinity; (b) copper number; and (c) nitrogen content.

The ash content which is allowable after the rot of enzyme steep of a gray cloth containing no China clay or similar ingredients has been determined, as well as for a gray sour; and the copper number which should be exhibited after proper washing is also known. Provision for the necessary measure of the residual starch is made, too. The nitrogen value, however, turns out to be of use for comparative purposes only.

Measurements have been made on the effect of the steep on subsequent one-process scouring with caustic alkali. The chemical properties of the scoured material and its general cleanliness after washing out of the kier are directly related to the efficiency of the steep. The best whites are obtained, however, only when the steep has included a treatment with acid. This superiority is in no way associated with tendering, which causes a deterioration in the white finally attained approximately proportional to the copper number produced by the acid attack.

Emulsifying Agents in Scouring

Small scale experiments on the effect of adding emulsifying agents to the scouring liquor have been completed. Their effect appears to be confined principally to a more efficient removal of fat and wax and to the production of a rather superior white as a result of a standard scour. The organic solvents usually recommended for the purpose are inefficient relative to the soaps, of which resin soap exerts the greatest effect on the wax content and on the removal of oil stains, though it is somewhat inferior to coconut oil soap and to good normal hard soaps with respect to the white produced. The addition of sodium silicate has a very favorable effect on the white attained as a result of scouring.

Good progress has been made in the investigations which deal with the action of acids and of oxidizing agents on cotton. As explained in the previous report, the practical object of these studies is two-fold; first the development of those exact methods of chemical analysis which provide authoritative statements of the extent to which cotton has been attacked by chemicals used in bleaching, dyeing, and finishing processes, and secondly the definition of limits or standards beyond which the practical textile value of cotton must be considered as unnecessarily depreciated as a result of such chemical treatments.

Tendering by Light

A more extended examination of the influence of a number of mechanical and chemical factors on the tendering of cotton yarn by light has led to the general conclusion that any treatment which increases the strength of the unexposed material also increases its resistance to light. Bleaching leads to an appreciable loss of strength by singles cotton yarn, and bleached yarn is proportionately more weakened by exposure than is the gray yarn. The susceptibility to tendering of mercerized cotton is apparently much the same as that of unmercerized, while doubled yarns are rather variable in behavior as compared with singles, though from the point of view of the residual strength of material which has suffered a long exposure one end of doubled yarn is superior to two of the singles.

A continuous succession of cases of tendering have been examined in connection with researches on the effects of : (a) light; (b) oxycellulose formation; (c) hydrocellulose formation, on cotton and also as a method for diagnosing faults in production.

A comprehensive program of research has been carried out on the effect of humidity on warp yarns, sized and unsized, of several qualities, and the series of results so far obtained have been reported to the Home Office Committee on Humidity in Weaving Sheds and will be laid before members of the Association shortly.

MALONE, N. Y. The New York State Water Power Commission has decided to proceed with power development plans in the St. Lawrence River near the Canadian border. At a meeting last week it was agreed to construct a huge power plant in the St. Lawrence which will aid in the industrial development of that section.

Measuring Up

DO you know the "measure" of each machine in your mill. Not its size in feet and inches—but its measure in production terms?

Because, production alone determines whether it shows as a big or a small factor in creating profits.

Brinton machines are big in quantity production, big in high quality production, and tremendously big in service, performance and economy of upkeep and operation.

Let us send you full information of our complete line.

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3700 Kensington Avenue Philadelphia

CIRCULAR BRINTON KNITTING MACHINES

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Great Britain and the Continent: Wildt & Co., Ltd., Leicester, Eng.

South America: Santiago Scotto, Moreno, 1756, Casilla Correo 662, Buenos Aires, Argentine Republic.

Australia: J. H. Butter & Co. Sidney, Melbourne.

China and Japan: Elbrook, Inc., 51 Kiangse Road, Shanghai, China.

Everyone concerned with the production or sales of knitted fabrics will be interested in the exhibit of a complete Full-Fashioned Hosiery Mill in operation, in The Liberal Arts Building at the Sesqui-Centennial International Exposition.

This unique display is under the direction of—

Harry C. Aberle Co.
Apex Hosiery Co.
Berkshire Knitting Mills
Fidelity Knitting Mills
Hancock Knitting Mills
Textile Machine Works

You will be most cordially welcomed.

See also CONSOLIDATED TEXTILE CATALOG

FABRICS

Wool Goods

Greater Strength Noted in Wool Goods

Advances Considered but Regarded as Untimely at Present —Sellers Trust Market

The situation in men's wear and women's wear is gradually reaching a point where serious consideration must be given to the problem of advancing prices. Business has been improving under the pressure of a need for goods on the part of distributors who had let themselves get unusually short of supplies. It is no longer possible for the manufacturer to get all of his raw material at the same low prices as obtained when he named his spring prices in late July or early August. Profit margins have been small, and unless they are to be still smaller, some manufacturers believe that they should get more money for their goods.

The viewpoint of selling agents recognizes the necessities of the distributing market in connection with any proposition for the advance in prices, and their conclusions are that such a change is not timely at present. In the first place clothiers are about to go after spring, 1927, business with the retailer and premature action on the primary market might upset their campaigns without bringing commensurate advantage to the industry. Then also competition with the closed down mills is to be considered for when prices rise to an attractive level producers who are now not able to stand the pace, will start up their machinery and the market will have to reckon with a greater yardage of goods, and excess yardage has been the bugbear of the trade for a number of seasons.

* * *

Reports Best Fall Fabrics and Colors

"The Trend," issued by the Fashion Service Dept. of the Botany Worsted Mills states that the four leading Botany fabrics for fall are Drurylaine, Rayotwill, Colleen Rep and Repauray. It is also stated that the leading colors from Botany's fall chart are Sesqui Red, Sinbad Blue, Spruce Green and Oakcrest Brown.

The style trend is summarized as follows: "Wide acceptance of the recently perfected woolen dress materials has brought about by logical means a revival of the soft-line tailored frock for general fall wear. The predominant influence of pleats for the skirt section, tucking and cording for bodice, tunic or jumper blouse, have created a definite demand for weaves which readily adapt themselves both to practical and style requirements. To this end the mode has established the vogue of light weight reps, covert reps and covert twills, as offering the ideal characteristics for sports, semi-sports and all-around town wear dresses."

* * *

American Woolen Co. Opens Women's Wear on October 5

The American Woolen Co. will open complete lines of women's wear woolens and worsteds for the spring season on Oct. 5. These lines are in Department 4. The showing follows the pricing of poiret sheens and similar staple worsted dress goods for spring about mid-August. This coming opening by the American, is scheduled much later than usual, but is in keeping with the needs of the women's garment trade as their season has been much delayed by the strike in the New York industry and general feelings of caution.

Silk Goods

Satins Scarce in Broad Silk Market

Manufacturers Start Up Operations Again on This Number —Georgettes in Demand

Changing their plans on short notice, which has come to be the regular thing in recent years, broad silk mills put considerable quantities of satins in work during the second half of September. A threatening shortage of merchandise was the reason for the sudden decision on the part of manufacturers to keep their looms going on this number. Some weeks ago the possibility of a scarcity of satins was pointed out in these columns due to the fact that so many had announced their intention of curtailing in September. Demand has kept up and even increased for them as buyers turned away from the Cantons.

It is difficult to judge the exact position of the Canton numbers. Reports are conflicting and while some houses state that demand has gone flat and many are caught with quantities coming through from the dyers, others state that they could continue to sell more goods if they only had them to sell.

Silk Situation at a Glance

PRODUCTION: Increasing again.

DEMAND: Good.

STOCKS: Small with possible exception of heavy crepes.

RAW SILK: Prices firm; stocks lower in New York.

SENTIMENT: Confident, mills likely to run full for some months.

Cotton Goods

Goods Resist Fall of Raw Material

Lack of Second-Hand Offerings Suggests Fundamental Strength— Gray Goods Shade Lower

Even with the sharp downward reaction of raw cotton to the Government report of last week, there have been few signs of excitement in the cotton goods market, and after a fractional decline in gray goods, the market is riding quietly on even keel. Traders generally are watching the situation with the keenest interest, and as the chance seems about equally divided in their minds that the raw material will rebound or that it will fall still further, they are waiting the turn without making commitments.

Gray goods are lower than they were last week. Not only have the higher nominal asking prices disappeared, but the former trading basis has given way to a lower level. Not much business is being done, but it is significant of the outlook that second hand offerings are reported to be unusually scant. Normally after an active period and in the face of a drop in price, buyers will throw overboard considerable goods. Such lately has not been the case, and the conclusions are that buyers either are not convinced that prices are going much lower or they have a real need for the goods they have bought and so are unable to give them up.

The selling of finished goods has been slowed up by the change in raw cotton sentiment, but no reflection of the change has been seen in prices of established goods. Possibly in some lines if business were proffered it would be taken "on memorandum," indicating a little lack of faith in the present quotation.

* * *

Watching Gain in Ginning During Sept. 15 to Oct. 1

The key figures to the true situation in raw cotton are to be found in the next ginning report, according to well posted merchants in the cotton goods trade. It will not be the total amount of cotton ginned to Oct. 1 which will be of interest, but it will be the amount ginned between Sept. 15 and Oct. 1 as compared with the similar period of last year.

The ginning report to the middle of September of this year showed the present crop to be a million bales or so behind that of last year. This was expected for the reason that last year's crop was early and this year's is a bit late. However as weeks pass this difference will have to be made up and it will have to be made up largely before the date of killing frost.

If the last half of September shows a gain on that period of last year of more than half a million bales, the forecast of a crop of nearly 16,000,000 bales will begin to take on greater probability. On the other hand if the new figures do not show a rapid rate of gain in coming up from behind last year's figures, then so large a crop may not eventuate after all.

* * *

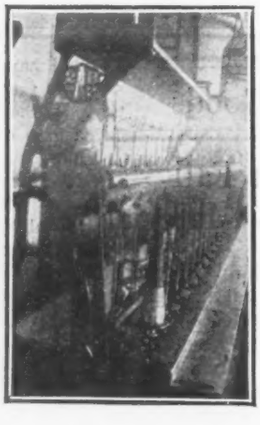
Aftermath of Florida Storm

The Florida hurricane may yet have its effect on the cotton market says one of the market's best prophets. A cyclonic disturbance such as was witnessed two weeks ago is said to have widespread effects in altering air currents many hundreds of miles away from the focus of the disturbance and for many weeks thereafter. The recent cold snap in the Middle West is said by the weather-wise to result from the rush of colder atmosphere from the North, drawn southward to the low pressure areas which are always at storm centers. Further cold snaps extending into the cotton belt, and early frosts are therefore good possibilities, says our informant.

In support of the above one man who was interested in the relation of this to the raw cotton market delved back into history for something similar in the past which might bear out his contention. It is claimed that in 1907 and in 1916 extensive storms similar to Florida's recent scourge took place during September in the Gulf area and that in both instances early cold weather and frosts followed. Examination of raw cotton fluctuations for those years does not bring out anything conclusive. In 1907 the depressing influences of the panic probably outweighed the threat of early frosts, but November of that year did mark the start of a brief upturn. In 1916 the market had been climbing since February and prices in November marked a momentary top until it was exceeded in May, 1917. The data is given for what it is worth.

Cotton Goods Quotations

	Sept. 29	Sept. 22	Sept. 30, 192
Spot cotton, N. Y....	15.20¢	16.47¢	23.30
Print Cloths:			
27- in., 64x60, 7.60..	5-5½¢	5⅝-5¾¢	6¾-6⅞
38½-in., 64x60, 5.35..	7-7½¢	7⅝-8¢	9½-10
39 in., 68x72, 4.75..	8-8½¢	8½-8⅝¢	10¾-11
39- in., 72x76, 4.25..	9¼-9⅜¢	9⅝-9¾¢	12½
39- in., 80x80, 4.00..	10-10¼¢	10¼-10½¢	13
Brown Sheetings:			
36- in., 56x60, 4.00..	8¾-9¼¢	9¼-9⅜¢	11-11½
36- in., 48x48, 3.00..	10⅝¢	11¢	12¾
37- in., 48x48, 4.00..	8⅜-8½¢	8⅞-9¼¢	10¼-10⅜
Pajama Checks:			
36½-in., 72x80, 4.70..	8½-8¾¢	9¢	11⅜-11¾
36½-in., 64x60, 5.75..	7-7½¢	7½-7¾¢	9⅛-9¼
Miscellaneous:			
Drills, 37-in., 3 yd....	11¢	11½-11¾¢	1
Denims, 2.2 lb.....	15½¢	15½¢	1
Tickings, 8 oz.....	18½-20¢	18½-20¢	23½
Standard prints.....	8¢	8¢	9½
Eastern staple ginghams, 27-in.....	9¢	9¢	1



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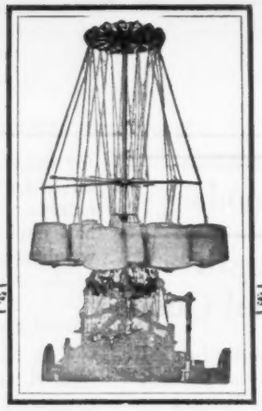

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FINANCIAL

Fair Volume Trading in Fall River

FALL RIVER, MASS.—There was a fair volume of trading in local mill stocks during the week and at new high prices for several of the issues. The bulk of the stock is said to have come into the market from outside holders, local owners still declining to consider present bid prices, though they have been materially advanced in the last month. King Philip mills and Davis mills were the two most active of the issues, both selling in considerable volume. The former sold at the new high price of 130 per share and at the close of the week 128 ex-dividend was bid without bringing out any stock. Davis mills sold in good volume at 74 to 76½ and at the close of the week the asking price had been advanced to 80.

Flint mills sold at 95 per share ex-dividend, an advance of 5½ over last previous sale and Union Cotton Mfg. Co. sold at 86½, an advance of 2½ over recent sale price. Sagamore Mfg. Co. has shown considerable strength, sales having been quoted from 152½ to 155. The latter price was being asked and 152 was bid at the close of the week.

Merchants Mfg. Co. has been in good demand and sales were quoted at 53 to 58, with more being sought at 57. No stock was available under 60 late in the week.

Dividends Declared

Mill	Pd.	Rate	Stk.	Payable	To stock of
Naumkeag	Q	$3.00	Com.	Oct. 1	Sept. 15
Lawton	Q	2.50	Com.	Sept. 30	Sept. 23
Nashua	Q	1.75	Pfd.	Oct. 1	Sept. 23
Arlington	Q	1.50	Com.	Oct. 1	Sept. 21
Plymouth cordage.	Ex.	2%	Com.	Oct. 20	Oct. 1
*Plymouth cordage.	Q	1½%	Com.	Oct. 20	Oct. 1

Cheap Cotton A Bullish Factor

Expands Potential Market and Widens Yarn and Cloth Margins —Important Inventory Losses Unlikely

BOSTON, Sept. 29.

COTTON cheaper than at any time since the season of 1920-21 has done more than any other factor to put new hope into the domestic cotton industry. For New England mills it is an even more important factor than for southern mills, for officials of the former are well aware that unless they buy their cotton right and sell their goods right there is nothing that can be done inside the mill to counterbalance buying and selling losses, whereas, the average southern mill with lower wage costs and longer operating hours has a better chance to retrieve in processing mistakes made in buying and selling.

The relatively cheap cotton of the two seasons preceding 1923 was largely responsible for the record-breaking business done in yarns and cloths during that year; another factor of importance was the hand-to-mouth buying of yarns and cloths that had followed the slump of business in 1920. The spot position of users of cotton yarns and cloths is today not much better than it was in the fall of 1922, and the mills are carrying no more stocks today than they were at that time. The statistics recently published by the Cotton Textile Merchant's Association of New York, giving sales between July 1 and September 15 and unfilled orders and stocks as of September 15 for about 80% of the staple cloth production of the country, shows that sales during this period exceeded production by about 47¾%, that unfilled orders had increased 91½% and that stocks had decreased 23%. Temporarily the radical decline in cotton futures prices has cut off demand and has unsettled values somewhat, but there is evidence that as soon as prices are stabilized upon the low basis made possible by the decline in cotton there will be a resumption of buying upon an even more active scale.

No Large Inventory Losses

Failure of most investors in textile securities to interpret bullishly and immediately the effect of cotton's decline upon cotton mill stocks is largely due to their fear that there will be a repetition of inventory losses that followed radical declines in cotton values during the last two years. Even if cotton should go to 12c temporarily inventory shrinkages to be taken by the majority of mills on raw cotton, yarns and cloths, in the present instance, will be comparatively small owing to the fact that stocks not covered by orders are of relatively small volume. Furthermore, the cancellations of yarns and cloths that have been an important cause of inventory losses on previous occasions are unlikely in this instance because the major portion of the buying has been of a hand-to-mouth character and the goods are needed for immediate use. At all events, there have been no important cancellations of importance thus far and the price decline in yarns and cloths has not been proportional to the decline in the raw material.

Of course there is as yet no certainty that manufacturers will buy their cotton at an advantageously low average for the season or that New England mills will own their cotton at a lower average than southern mills. Thus far there has been very little mill buying, the majority waiting for the bottom instead of buying on a scale down. Should such a policy be persisted in and buying be concentrated on the reaction from bottom values the advance may be so sudden and radical as to give few mills a substantial advantage in the price of their cotton. On the extra staple cottons largely used by New England mills, however, there has been much buying of basis recently at as low figures as have been touched in recent years, and if they later on hit the market right in fixing prices of futures they will have gone a long way toward ensuring business profits for the season.

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Ch'ge
15	Naumkeag*	100	155-154½	—4½
16	Androscoggin	100	51	—1
4	Ipswich, com.	100	48½	—1½
2	Westamoe	100	20	—4
5	King Philip	100	135	—10
200	Hill	100	26⅝	—4⅜
32	Great Falls	100	19½-19	— ⅜
80	Hamilton	100	65c	—15c
50	Salmon Falls	100	10⅜	—1⅛
10	Wamsutta	100	67⅛	—1⅜
10	Manomet	100	19⅛	.....
70	Arlington	100	75⅛	— ⅞
10	Pepperell	100	129	+3⅜
15	Plymouth Cordage*	100	133¼	— ⅝
100	Lawton	100	116	—17
4	Farr Alpaca*	100	176	+3¾
10	Dartmouth, com.	100	119½	+ ½

583 Total.

* Ex. div.

MILL STATEMENTS

Name and address of company	Line of business	Fiscal year	Assets						Total	Liabilities		
			Cash and debts receivable	Raw materials, mdse., etc.	Total quick assets	Real estate, buildings and machinery	Miscellaneous Amount	Miscellaneous Description		Accounts payable, floating and funded debt	Capital stock	Surplus, profit and loss, etc.
Pierce Mfg. Corp., New Bedford, Mass.	Cotton	Dec. 31, 1925	$556,227	$1,740,499	$2,296,726	$810,210	$603	Miscellaneous	$3,107,539	$80,988	$600,000	$2,426,551
		Dec. 31, 1924	411,493	1,893,907	2,305,400	778,128	602	Miscellaneous	3,084,130	69,953	600,000	2,414,177
Potter Knitting Co., Springfield, Mass.	Knit	Dec. 31, 1925	23,131	53,744	76,875	165,910	185,187	Miscellaneous	427,972	147,829	471,800	[1]44,811
		Dec. 31, 1924	40,954	45,147	86,101	125,393	396,187	Miscellaneous	607,681	135,881	471,800	.....
Neponsit Woolen Co., Canton, Mass[2].	Wool	Mar. 31, 1926	109,840	178,975	288,815	169,505	2,089	Miscellaneous	460,409	90,206	275,000	95,203
		Mar. 31, 1925	131,118	172,958	304,076	181,196	2,234	Miscellaneous	487,506	112,626	275,000	99,880
Holyoke Silk Hosiery Co., Holyoke, Mass.	Knit	Dec. 31, 1925	85,872	130,982	216,854	237,230	34,940	Miscellaneous	489,024	72,379	319,400	97,245
		Dec. 31, 1924	86,936	86,875	173,811	246,064	2,829	Miscellaneous	422,704	16,997	313,900	91,807
Queensbury Mills, Worcester, Mass.	Wool	Dec. 31, 1925	335,027	599,588	934,615	668,130	3,374	Miscellaneous	1,606,119	585,549	365,500	655,070
		Dec. 31, 1924	377,900	715,229	1,093,129	652,200	7,962	Miscellaneous	1,753,291	689,246	815,533	248,512
Arnold Print Works, North Adams, Mass.	Bl. &D	Dec. 31, 1925	620,744	528,047	1,148,791	5,698,644	392,663	Miscellaneous	7,240,098	393,406	1,500,000	5,346,692
		Dec. 31, 1924	1,193,504	657,211	1,850,715	1,444,525	1,951,510	Miscellaneous	5,246,750	394,436	3,000,000	1,852,314
Armstrong Knitting Mills, Boston, Mass.	Knit	Dec. 31, 1925	94,933	300,801	395,734	66,281	.....	.....	462,015	185,891	197,000	79,124
		Dec. 31, 1924	111,302	324,516	435,818	64,315	.....	.....	500,133	183,483	195,000	121,650
Davol Mills, Fall River, Mass.	Cotton	Mar. 28, 1926	117,520	496,668	614,188	1,672,686	.....	.....	2,286,874	423,776	1,500,000	363,099
		Mar. 28, 1925	189,660	446,998	636,658	1,642,778	.....	.....	2,279,436	409,073	1,500,000	370,363
Shawsheen Mills, Andover, Mass.	Wool	June 30, 1926	348,931	2,672,411	3,021,342	8,436,083	[3]634,044	Miscellaneous	12,091,469	10,091,469	2,000,000	.....
		June 30, 1925	241,143	1,909,414	2,150,557	8,662,597	[3]803,935	Miscellaneous	11,617,089	9,617,089	2,000,000	.....
Ballardvale Mill Co., Ballardvale, Mass.	Wool	Feb. 5, 1926	16,835	55,048	71,883	113,474	[4]146,237	Miscellaneous	331,594	106,594	225,000	.....
		Feb. 5, 1925	17,456	205,147	222,603	113,474	39,855	Miscellaneous	375,932	150,932	225,000	.....
Winthrop Mills Co., Winthrop, Maine.	Cotton and wool	May 31, 1926	636,686	514,366	1,151,052	510,387	101,125	Miscellaneous	1,762,564	429,678	400,000	932,886
		May 31, 1925	792,361	471,126	1,263,487	533,273	.....	.....	1,796,760	89,796	400,000	1,306,964

[1] Deduct deficit $236,468. [2] Includes deficit $626,529. [3] Includes deficit $794,509. [4] Includes P. & L. item of $145,183.

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Financial—Continued

Southern Mill Common Stocks Advance Again

GASTONIA, N. C., Sept. 25.—The general average price of 25 common stocks of southern cotton mills showed a further advance for the week ending today according to the weekly summary as furnished by R. S. Dickson & Co. The average price now stands at $111.00 as compared with $110.76 a week ago or an increase of 24 points. The average of the same stocks 30 days ago stood at $110.28.

The preferred issues continued quiet throughout the week, which is usually the case when the market is active and advancing in the list of common stocks, however, according to the Dickson report, the preferred issues will no doubt show a gradual advance throughout the year as funds become available for investment during the fall months.

New Bedford Shares Firmer

NEW BEDFORD, MASS.—The gain noted in mill shares in the New Bedford market at the beginning of September has been gradually increased until at the present time an average advance of approximately 5 points has been reached since the figures of 4 weeks ago. The average price is now around 90, which in ordinary times would be regarded as a ridiculously low figure. The market continues to maintain a firm attitude, and most of the shares that a few short weeks were being offered at low figures have either been absorbed or withdrawn from the market.

While the mills are gradually starting up more machinery, mill men generally are of the opinion that the fine cotton goods situation does not as yet warrant the advanced prices that have been registered in sales of mill stocks.

Lancashire Cotton Mill Dividends

MANCHESTER, ENG.—Thirteen Lancashire cotton spinning companies paid an average dividend for the three months ended August of 6.43% per annum, absorbing £23,142, compared with 6.82 in May, 7.20 in February, and 7.36 each in November and August, 1925. The total paid-up ordinary share capital of the 13 companies is £1,863,047 and the aggregate spindleage 1,305,172.

An average payment for the six months ended August of 3.43% requiring £51,250, against 3.83 in February and 2.74 in August, 1925, was made by 17 companies, which have a total paid-up ordinary share capital of £3,613,000 and possess 2,033,960 spindles.

Silk Stocks on N. Y. Exchange

(Week ending Sept. 28)

1926 High	1926 Low	Stocks	Sales	High	Low	Last
29¼	27⅝	Belding-Hemingway	3,000	30	27⅝	*27⅝
12⅝	12⅝	Century Ribbon	200	16½	16½	16½
41⅝	33⅛	Julius Kayser & Co.	2,000	41⅜	40⅛	40½
15⅛	15	H. R. Mallinson	100	16	16	16
22	12⅛	Van Raalte & Co.	100	14⅝	14⅝	14⅝

*Ex-div.

New England Textile Stocks

(Quotations at "Public Sale" are based upon last sales at Boston public auction and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.)

	Public Sale	Bid	Asked
Am. Wool. pfd.	79½	...	...
Am. Mfg. pfd.	82	80	83
Amoskeag, com.	54	...	...
Androscoggin	51	52	54
Appleton	45¼	40	45
Arlington	75¼	75½	78
Bates	133¾	132	135
Berkshire Cot.	...	134	138
Bigelow-Hfrd, com.	76	...	...
Boott	...	103	108
Edwards	80	50	58
Esmond, pfd.	100	98	...
Everett	24⅝	22	24½
Farr Alpaca	176	177	181
Great Falls	19	19	22
Hamilton Woolen	35	33	...
Hill	20⅜	23	...
Ipswich, pfd.	79	82	87
Ipswich, com.	48½	49	53
Lawrence	67¾	67	71
Ludlow Asso.	167¼	168	172
Lyman	119¾	117	120
Massachusetts	67¾	70	73
Merrimack, com.	114	112	115
Nashua, com.	50¼	50	53
Nashua, pfd.	82⅛	78	85
Naumkeag	154½	154	157
N. E. So. pfd.	10	...	...
Otis Co.	23¼	22	27
Pacific	47	...	...
Pepperell	129	127	129
Plymouth Cordage	133¼	132	135
Tremont & Suffolk	47½	46	51
York	35	40	43

Fall River Mills Stocks

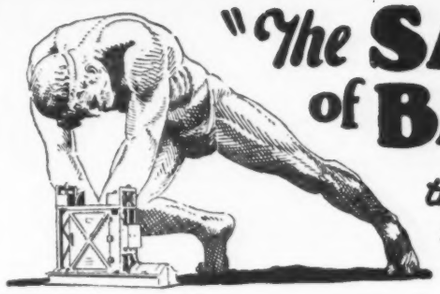
(Quotations furnished by G. M. Haffords & Co.)

	Bid	Asked
American Linen Co.	...	21
Arkwright Mills	18	...
Barnard Mfg. Co.	...	50
Borden Mfg. Co., Richard	49	52
Border City Mfg. Co.	45	...
Bourne Mills Co.	70	...
Chace Mills	31	35
Charlton Mills	113	120
Cornell Mills	82	...
Davis Mills	70	...
Davol Mills	30	...
Flint Mills	85	...
Granite Mills	32	40
King Philip Mills	122	...
Laurel Lake Mills (com.)	8	...
Laurel Lake Mills (pfd.)	...	...
Lincoln Mfg. Co.	50	...
Luther Mfg. Co.	...	125
Mechanics Mills	25	...
Merchants Mfg. Co.	55	60
Narragansett Mills	...	...
Osborn Mills	...	45
Parker Mills, com.	...	...
Parker Mills (pfd)	...	...
Pilgrim Mills (com.)	...	152
Pocasset Mfg. Co.	96	...
Sagamore Mfg. Co.	150	...
Seaconnet Mills	...	...
Shove Mills	...	...
Stafford Mills	...	40
Stevens Mfg. Co.	...	112
Troy C. & W. Mfg.	100	...
Union Cotton Mfg. Co.	82	...
Wampanoag Mills	28	35
Weetamoe Mills	18	30

New Bedford Quotations

(Quotations furnished by Sanford & Kelly)

	Bid	Asked
Acushnet Mills	77½	...
Beacon Mfg. com.	125	...
Beacon Mfg. pfd.	...	97½
Booth Mfg. Co., com.	100	106
Booth Mfg. Co., pfd.	...	100
Bristol Mfg. Co.	...	125
Butler Mfg. Co.	66	69
City Mfg. Co.	98	...
Dartmouth Mfg. Co., com.	115	120
Dartmouth Mfg. Co., pfd.	84	88
Fairhaven Mills, pfd.	...	14
Gosnold Mill, com.	13	...
Gosnold Mills, pfd.	30	...
Grinnell Mfg. Co.	68	...
Hathaway Mfg. Co.	100	...
Holmes Mfg. Co., com.	...	80
Holmes Mfg. Co., pfd.	...	80
Kilburn Mill	...	119
Manomet Mills	17½	19½
Nashawena Mill	81	84
N. B. Cotton Mills, com.	100	...
N. B. Cotton Mills, pfd.	85	...
Neild Mill	142½	...
Nonquitt Spng. Co.	43	46
Pemaquid Mills	...	26
Pierce Mill	340	...
Potomska Mills	65	...
Quissett Mills, com.	110	115
Quissett Mills, pfd.	90	...
Sharp Mfg. Co., pfd.	39	42
Sharp Mfg. Co., com.	15	18
Soule Mill	142	...
Taber Mill	87	91
Wamsutta Mills	67	69
Whitman Mills	50	55



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the most powerful baling press built for

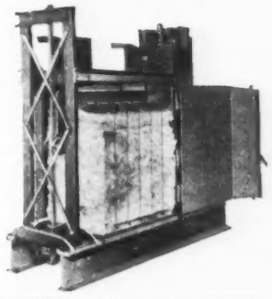
- Cotton
- Wool
- Rags
- Paper
- Shavings
- Excelsior
- Metal Scraps

All steel, economical and quick in operation, fireproof, "fool-proof" and indestructible Schick Balers provide the ideal means of handling waste material of every kind.

Made in 8 sizes—a size for every requirement—hand balers 125 to 375 lbs. capacity—Power balers 350 to 1500 lbs. capacity.

Depend on a Schick Baler for handling your waste material at a profit.

ALL STEEL Schick FIREPROOF



DAVENPORT MFG. CO., Inc.
Dept. A
Davenport, Iowa

Write for Catalog and Prices

Check These Points

Labor Supply: Anglo Saxon workers of the very best type, free from -isms.

Nearby Coal: Excellent in quality and practically boundless in quantity.

Hydro-electric Power: Available at 90% of the cities and towns in the territory.

Railway Transportation: Prompt and dependable with direct connections to most of the nation's major markets.

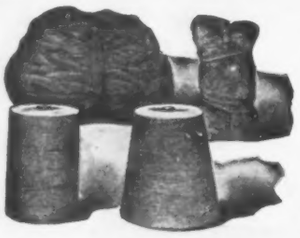
These points summarize textile manufacturing advantages on lines of the Central of Georgia Railway in Georgia, Alabama and the Chattanooga District.

Detailed information will be gladly sent to you on request.

J. M. MALLORY, *General Industrial Agent*

CENTRAL OF GEORGIA RAILWAY
413 Liberty Street, West
Savannah, Ga.

CENTRAL OF GEORGIA



PAULSON, LINKROUM & CO.
INC.

COTTON YARNS

of every description for Weaving and Knitting

We specialize in Cotton Yarns for Export

52 Leonard St., New York
PHILADELPHIA CHICAGO
PAWTUCKET CHARLOTTE, N. C.

Gassed and Ungassed Combed Cotton Yarns

Spun by

The Arkray Mills, Inc.

Yarns as fine as 120s gassed and ungassed for the weaving, knitting and electrical trade and as coarse as 16s for the thread industries are spun at this mill out of the finest selections of sakelaridis or peeler cotton. The modern system of spinning yarns at this mill and the high grade of cotton employed, enable us to supply a spinning unsurpassed by either domestic or imported yarns.

Quotations and samples promptly submitted

H. A. FLORSHEIM, *General Sales Mgr.*
225 Fifth Avenue New York, N. Y.

Also exclusively representing

GRAY MFG. CO. PARKDALE MILLS, INC.
ARLINGTON COTTON MILLS ARROW MILLS, INC.
MYRTLE MILLS, INC. FLINT MFG. CO.

Johnston Mills Company
"Direct to Consumer"

COTTON YARNS

MERCERIZED

Ply yarns of SPINNERS PROCESSING COMPANY. Noted for evenness, lustre, workmanship, knitting and finishing excellence. Full range of numbers delivered in any form of put-up,—natural —gassed—bleached—dyed.

Single yarns of THE ELMORE COMPANY, generally recognized as peculiarly adapted to all plaiting and splicing purposes. Available in all counts to 100/1 and 120/2—bleached—tinted, or dyed

CARDED and COMBED

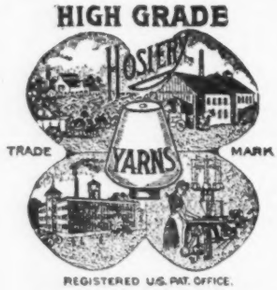
Yarns from the JOHNSTON chain of thoroughly modern and capably managed mills are sold under the name and added guarantee of each mill that these yarns must be satisfactory.

SALES OFFICES:

NEW YORK: 93 Worth St. PHILADELPHIA: Public Ledger Bldg.
CHATTANOOGA: 805 James Bldg. CHARLOTTE: Johnston Bldg.
CHICAGO, ILL. READING, PA.

KING COTTON MILLS CORPORATION

HIGH GRADE



MILLS: BURLINGTON, N.C.

Mutual Building, Richmond, Va.
Range: 14/1-24/1

SOME people would call them "refinements." We consider them merely incidental to King Quality. To wit: using tape driven spindles — employing weavers knots — putting up yarns in trade mark packages.

Sold Direct

ACME
SALES COMPANY
S. L. DIGGLE, MGR.
906 JOHNSTON BLDG. CHARLOTTE, N. C.

CARDED-COMBED-MERCERIZED
COTTON YARNS
ALL COUNTS AND DESCRIPTIONS FOR THE KNITTING-WEAVING-CONVERTING TRADE
Mercerized Yarns by
DIXIE MERCERIZING CO.
IN NORTH CAROLINA

COTTON YARNS

Changes in Smith & Dove Personnel

Certain important changes have been made recently in the personnel of the Smith & Dove Mfg. Co., manufacturer of linen threads, yarns and twines, at Andover, Mass. In accordance with the company's policy, these changes have represented promotions of men within the organization rather than selection of men from the outside.

J. G. Megquier, sales manager, has resigned and H. A. Bodwell, treasurer, has been appointed to this position. William J. Simpson, for many years assistant superintendent, succeeds Roy H. Bradford, superintendent, who has resigned.

Changes in sales representation include the appointment of Arthur J. Kelly, who has represented the company in Massachusetts for a number of years, to take over the territory in the South Shore district of that State, formerly held by W. H. McMurray, who has resigned. Ralph Conant has been appointed representative in Maine, with headquarters at Augusta. D. H. Ford, representative in the Philadelphia district, has resigned and his territory has been taken over by

(*Continued on page* 111)

Yarn Buyers Feel More Confident

In Instances Are Anticipating, Though Others Are Still Trying to Bear the Market

S the cotton yarn buyer running any risk in purchasing today? This question applies not only to prompt shipments but also to contracts for future delivery. It is the consensus of opinion, in which a good many buyers themselves agree, that comparatively little danger would be incurred by those operating for the bulk of their requirements extending fairly well into the future. Indeed, it is the seller who is more conservative about transactions for future months than the buyer. This does not mean there is any large or general anticipation on the part of the buyer, but since the last report some fairly large contracts have been taken and more business has been offered and refused because of the figures at which buyers wish to operate.

Price Situation Muddled

With cotton at the lowest point it has touched in six years it is only natural there should be a decline in yarn prices, but the situation is not as plain as such a statement would seem to imply. On certain yarn and for certain deliveries—more particularly the latter—prices do not show much change from the situation before the report. Attempts to get yarn out of stock disclose the fact that supplies are in very small compass and those which are available are being held pretty firmly. As an illustration: For 25,000 lbs. of 12s single tinged tubes it would not be difficult to get 26c out of stock and yet this count has been quoted for future delivery by the mill at 22½ to 23c. Also 29c has been paid for white yarn of the same count. For future business it is evident that the weakness of the market has inspired sellers to sell the market short. Dealers would undoubtedly consider a concession from 31½c for 20s-2 warps and probably could obtain a lower figure than this from spinners. And yet a contract is reported this week for 60,000 lbs., beginning October, for 12,000 lbs. a month. It is possible that all the details of this order are not generally known for the figure is considered high on a contract to run into next year. On 30s, 37c could doubtless be shaded and an offer below this figure would probably be considered even though it might be a case of short selling. The market certainly presents opportunities for taking business under spinners' figures and there is no doubt that sellers will take advantage of this situation in the belief that spinners' ideas will be revised downward, with a continuance of the present cotton situation.

Ideas on Cotton Mixed

Members of the trade are willing to admit their ideas on the raw material are very much muddled. They did not expect any such report as the last one and consequently had no idea that cotton would go as low as it has. Talk of 15c cotton was heard before the report but it is questionable whether many really believed the market would touch this level. This applies even to the most bearish observers of the situation who now are very chary of predictions and who are not going to be surprised at anything. Even 12c cotton or below would not cause them to express particular wonderment, especially if the final estimate of the crop should be over 16,000,000 bales.

Buyers Have Been Whip-Sawed

With such confusion of opinion it is not strange that buyers' ideas regard-

Cotton Yarn Quotations

Carded—(Average Quality)

Double carded weav'g and knitt'g yarn 2c to 4c higher, according to size

Single Skeins or Tubes—(Warp Twist)

4s to 8s	—	—27½	20s	—	—31
10s	—	—28	24s	33	—33½
12s	—	—28½	26s	34½	—35
14s	—	—29	30s	—	—37
16s	—	—30	40s	—	—48

Two-Ply Skeins and Tubes

8s-2	—	—28	26s-2	—	—35
10s-2	—	—28½	30s-2	—	—37
12s-2	—	—29	36s	—	—46
14s-2	—	—29½	40s-2	—	—47
16s-2	—	—30½	40s-2 High breakage	50	—52
20s-2	31	—31½	50s-2	57	—58
24s	—	—33½	60s-2	—	—64

Single Warps

10s	—	—29½	24s	34½	—35
12s	—	—30	26s	35½	—36
14s	—	—30½	30s	37½	—38½
16s	—	—31½	40s	48	—49
20s	—	—32			

Two-Ply Warps

8s-2	—	—28½	24s-2	—	—34
10s-2	—	—29	26s-2	35	—36
12s-2	—	—29½	30s-2	37	—38
14s-2	—	—30	40s-2 ordinary	—	—47
16s-2	—	—31	50s-2	—	—58
20s-2	31	—32	60s-2	—	—64

8s-3 and 4-ply skeins and tubes; tinged, 24c; white, 28c.

Hosiery Cones (Frame Spun)

8s	—	—29	22s	31	—32
10s	—	—27	22s (silver and Jaeger)	—	—33
12s	—	—27½	24s	32	—33
14s	—	—28	26s	33½	—34
16s	—	—28½	30s tying in	—	—34
18s	—	—29	30s extra quality	36	—37
20s	30	—31	40s	47	—48

Combed Peeler—(Average Quality)

Warps, Skeins and Cones

20s-2	44	—45	50s-2	60	—62
30s-2	48	—50	60s-2	68	—72
36s-2	50	—52	70s-2	80	—85
40s-2	52	—54	80s-2	90	—95

Singles

12s	—	—38½	50s	47	—48
14s	—	—39	38s	50	—52
16s	—	—39½	40s	52	—54
18s	—	—40	50s	60	—62
20s	—	—41	60s	68	—72
24s	—	—43	70s	80	—85
28s	—	—46½	80s	90	—95

Mercerized Cones—(Combed, Ungassed)

26s-2	61	—63	80s-2	1 15	—1 17
30s-2	63	—66			

Singles

36s-2	67	—69	30s	—	—85
40s-2	69	—71	40s	—	—90
45s-2	73	—75	50s	—	—95
50s-2	76	—78	60s	—	—1 05
60s-2	85	—88	70s	—	—1 20
70s-2	99	—1 02	80s	—	—1 60

Peeler—(Super Quality)

Single Cones

	Carded		Combed		Carded		Combed	
10s	33	—34	42	—44	26s	38	—39	50 —52
14s	34	—35	44	—46	30s	40	—42	52 —55
16s	34½	—35½	45	—47	36s	45	—47	57 —60
18s	35	—36	46	—48	40s	52	—54	62 —65
20s	35½	—36½	47	—49	50s	—	—	67 —70
24s	37	—38	40	—51	60s	—	—	75 —85

Combed Cones, Warps and Tubes

20s-2	48	—50	40s-2	60	—65
24s-2	50	—52	50s-2	65	—70
28s-2	52	—54	60s-2	75	—80
30s-2	53	—55	70s-2	90	—95
36s-2	57	—60	80s-2	1 00	—1 10

Combed Reverse Twist Thread Yarns—Skeins, Tubes or Cones 2, 3, and 4-ply

	Peeler		Sakelarides	
	Average	Best	Average	Best
24s	—58	— 62	82	85 —87
30s	—60	— 65	85	89 —90
36s	—62	— 67	88	92 —93
40s	—67	— 71	92	96 —97
45s	—72	— 76	97	1 02—1 03
50s	—77	— 81	1 05	1 07—1 10
60s	—87	— 91	1 15	1 18—1 20

Quotations are average prices of the counts and qualities indicated at the close of business Sept. 29. They do not cover lower or higher qualities unless specifically noted. For New York spot cotton prices, see page 117. For staple cotton prices, see page 119.

ABERFOYLE MANUFACTURING COMPANY

MERCERIZED YARNS

MAIN OFFICE
Bankers Trust Building
PHILADELPHIA

Johnston Building
CHARLOTTE, N. C.

323 So. Franklin St.
CHICAGO, ILL.

READING, PA.

James Building
CHATTANOOGA, TENN.

Westaway Building
HAMILTON, CANADA

MILLS
CHESTER, PA.

Cotton Yarns—Continued

ing yarn should be far from fixed. There have undoubtedly been those who over-stayed the market before the last advance and who paid more than they might have by waiting for still further recessions. This is likely to be the case again. The story is told by a dealer of a customer to whom he tried to sell 20s-2 warps at 30 and 31c. The buyer absolutely refused to consider these figures, with the result that he was loaded up for practically his season's requirements at 35c. Now he is back in the market trying to buy warps at 30c but probably, with his usual long-sightedness (?) he will want to buy cheaper if the market reaches this figure and will again overstay his market, only to buy considerably higher than he could today.

Knitting Yarn Contracts Placed

It is reported that certain contracts for knitting yarn have been negotiated since the report at decidedly lower figures than the majority would accept. For instance, the sale of 250,000 lbs. of 16s cones is said to have been made by a direct seller and the report is that 28c was the figure at which this deal was closed. This is not such a low price, however, even though spinners of knitting yarn have been asking 29 and 30c, for at least one spinner has responded to a query in the local market offering 16s at 28c and 20s at 30c. The latter is pretty generally accepted as the market price today but 28c is below anything that the majority would accept. It is also rumored that 22s have been sold as low as 29c by direct sellers. Nothing under 31c would be listened to by the great bulk of spinners.

Double-Carded Sales

Spinners turning out a good grade of double carded yarn are not finding it difficult to dispose of their product. One southern spinner is said to be running his mill night and day on this class of yarn and it is stated that he could run another mill of equal size in the same way if he had it. This yarn is going to drapery manufacturers, the lace trade and the webbing trade, as well as to other classes of consumers who are using it instead of combed yarn although the latter may be bought practically as cheap. For instance on 60s-2 combed, it is stated it is not an impossible matter to get all that is wanted at 65c and this figure is the lowest that the above mill has named on double carded yarn of the same count.

Changes in S. & D. Personnel

(*Continued from page* 109)

W. H. Hogg, who has represented the company in Middle New York for a number of years. The Chicago and Indiana territory, formerly handled by R. E. O'Neill, has been taken over by Robert L. Lockerbie, who has represented the company in Milwaukee for a number of years. B. C. Poole & Co., Cincinnati, O., have been appointed Smith & Dove agents in that district in place of J. Levy Sons, who formerly handled the account.

To Form Master Mechanics' Division

A committee from the Charlotte Engineers Club met with David Clark, editor of the *Southern Textile Bulletin* and J. M. Gregg, secretary of the Southern Textile Association Tuesday morning, Sept. 21, in the Chamber of Commerce Building, Charlotte, N. C., for the purpose of laying plans for a joint meeting of the Charlotte Engineers Club and master mechanics of the various textile mills in the South leading to the forming of a Master Mechanics Division of the Southern Textile Association. The date for this meeting was set for Oct. 27 at 10:00 a. m., in the auditorium of the Chamber of Commerce Building.

The following program was submitted, accepted and is to be carried out at this meeting:

Five minute talk by representative of Charlotte Engineers Club.

Five minute talk by secretary of Southern Textile Association.

Subjects to be Discussed

What are the steps to take in determining whether or not there is excessive coal consumption?

What are the steps to take in determining power consumption?

How do heating systems use more steam and coal than necessary?

What are the best books for an ambitious master mechanic to study?

At 12:30 p. m. luncheon will be served in the dining room of the Chamber of Commerce for all present and during this luncheon there will be an address made by F. Gordon Cobb, vice-president and general manager of the Lancaster (S. C.) Cotton Mills. Another address on "Scope of Power Developments in the South" will be made by W. S. Lee, vice-president of the Southern Power Co., Charlotte, S. C.

British Cotton Index Up

MANCHESTER, ENG.—At 170 on Sept. 17 for the general average of raw cotton, yarn and cloth prices, the *Cotton Trade Review* (Manchester) index, the basis of which is 100 as the July 31, 1914, price in each case, shows an advance of 12 points since Aug. 13. On Dec. 31, 1925, the figure was 177 and on Sept. 18, 1925, 234.

The steady increase in the price of Egyptian cotton, which has moved the index 37 points on the month to 218, is chiefly responsible for the average gain. Egyptian yarn has advanced 9 points to 172. In American cotton and American yarn the current figures are 143 and 164, 3 and 18 points higher respectively. Cloth at 152 is 2 points up.

PROVIDENCE, R. I. The real estate and machinery of S. H. Greene & Sons Corp., dyers, bleachers and finishers, will be sold at public auction on the premises at Riverpoint, in the town of West Warwick, on Oct. 19 and 20, by direction of the Superior Court of Rhode Island. G. L. & H. J. Gross, of Providence, are the auctioneers.

GROVES MILLS, Inc.

SUPER QUALITY

COTTON YARNS

COMBED PEELER, 24s to 80s, single and plies

CONES, TUBES, SKEINS AND WARPS

Samples and quotations promptly furnished

SALES OFFICE—

225 FIFTH AVENUE, NEW YORK

MILLS AT GASTONIA, N. C.

VAN COURT CARWITHEN

300 Chestnut Street, Philadelphia, Pa.

Sole Representative

SWIFT SPINNING MILLS — BRADLEY MFG. CO. — MUSCOGEE MFG. CO.

Whites, Stock, Dyed and Heathers

Cotton Yarns of Quality

ALL of COLUMBUS, GA.

FROM MILL DIRECT TO CONSUMER

L. P. Muller & Co.

206 Chestnut Street, PHILADELPHIA — 51 Leonard Street, NEW YORK

COTTON YARNS

PLUSH YARNS

HARTSELL SPINNING 12s to 16s

MASON SPINNING 20s to 30s

FORREST BROTHERS

Forrest Bldg., 119 S. Fourth St., Phila., Pa.

Superior Quality Knitting Yarns

Sole Representatives

Bladenboro Cotton Mills—Vass Cotton Mills

8s to 30s Extra Carded

JAMES E. MITCHELL COMPANY

Cotton Yarns

Philadelphia — Boston

GATE CITY COTTON MILLS

Manufacturers of

Superior Quality

WHITE KNITTING YARN on CONES

We sell direct to Knitters and guarantee satisfaction

217 Trust Co. of Georgia Bldg., ATLANTA, GA.

COTTON PRODUCTS COMPANY

Bankers Trust Building, Philadelphia, Pa.

Selling Agents for

SOUTHERN MERCERIZING COMPANY
Tryon, N. C.
Single Mercerized Yarns

A. M. SMYRE MFG. CO.
Gastonia, N. C.
Combed Peeler Yarns
30's to 70's
Weaving and Knitting

T.J. PORTER & SONS

MOHAIR, ALPACA
CAMEL HAIR
AND
CASHMERE YARNS
10s to 60s
For Weaving and Knitting

119 SOUTH FOURTH STREET
PHILADELPHIA
BRANCH SALES OFFICES
NEW YORK LOS ANGELES

TUCKASEGEE SPINNING CO.

Mount Holly, N. C.

TUCKASEGEE SPINNING CO. INC. MOUNT HOLLY N.C.

48s All Plies and Descriptions

The high and uniform quality of these yarns is a result of eternal vigilance in every step from raw material to finished yarn.

Samples and prices cheerfully furnished.

H. A. James
SELLING THE OUTPUT OF OVER 150000 COMBED YARN SPINDLES IN N.C.
GEN. SALES MGR.
450 FOURTH AVE. · NEW YORK. · PHONES: ASHLAND 3930-31-32

Cotton Yarns—Continued

Decline Will Aid Manufacturers

Cotton Approaches Low Point Reached During Last Ten Years —Market Unsettled

PHILADELPHIA

A UNIQUE situation confronts manufacturers, spinners and cotton yarn dealers. During the last three months yarns have advanced 5c a lb. in many instances, which in turn has been practically dissipated, sales having been made this week at prices similar to those current before the rise in yarns first started three months ago. Such flucuations have naturally had a disturbing effect upon the trade and it is probable this will continue to be apparent until stability again develops. The yarn market has declined more rapidly than it advanced although both movements were sudden and caught many spinners as well as manufacturers unawares. Dealers in several instances were short of yarn when the advance first got under way and neglected to cover until recently, now finding, after prices softened, that they had not diagnosed the situation correctly.

Buyers Become Confused

If spinners and dealers were unable to meet this unusual condition in the market it is not difficult to understand many manufacturers are now in an uncertain position as to their future policy. Many, however, have purchased large quantities of yarn since prices declined and others are in a position that would permit them to cover their needs until the end of the year at least on the basis of actual goods orders now in their books. That this is true throughout several trades is evident from the fact yarns advanced as rapidly or more so than cotton when prices were rising; and during the decline last week and this we find yarn prices declining less rapidly than the raw material. This indicates to many there is a good potential demand yet to be filled this year and this, it is predicted, will give yarn prices a more stable action than will be seen in the cotton market, advances being less drastic and declines less rapid.

One of the largest yarn factors in the country when commenting upon this unusual condition of the market, cotton now being within two cents of the low point this commodity has reached for ten years, not far above the low points reached in 1921 when futures were quoted between 11 and 12c, stated in his opinion the present time is an opportune one for consumers of cotton yarns to cover at least a portion of their requirements for the balance of this year with comparative safety. Several reasons are advanced by him which have appeared impressive to many of his customers, who during the present week have backed this viewpoint by buying exceptionally large quantities, as large as have been reported in this market for from three to five years.

One sale of knitting yarns called for 400,000 lbs., to be delivered from late this year until next July; another called for a slightly smaller amount and two sales of 200,000 lbs. each were reported. Attractive prices based upon present quotations from spinners were named in these sales but they prove there is a good potential demand for yarns yet to be filled, awaiting what manufacturers consider the proper time. This yarn factor is acting upon the assumption cotton is cheap at prevailing prices, being within striking distance of the low point reached in the last ten years. Upon past averages therefore it appears to him to be unlikely to expect further declines of importance and yarns are approaching what is termed as attractive levels.

According to this viewpoint the decline presents to manufacturers an attractive proposition and one that this factor considers unlikely to be bettered appreciably in the future and one that will represent a fair average purchasing price for the balance of the year at least, granting it to be possible prices have not yet quite reached the bottom of the downward move. Although many dealers have experienced a less active week there has been a good volume moved by several houses who have sold slightly under the market as prices continued their decline from day to day.

Combed Prices Steady

Other yarn factors express somewhat similar opinions as to the future trend of combed yarns. Quotations of these qualities have become easier as cotton dropped but the change has been immaterial while carded yarns have declined 3 to 5c from the top recently reached. Conditions exist in these yarns that cause many in the trade to predict the present softening of prices presents to manufacturers attractive possibilities for purchases, as in their opinion underlying conditions are such as to give the market a strong basis, causing them to believe prices appreciably lower will not be seen.

Combed spinners are in a good position in regard to forward business in hand and many are comfortably sold ahead for the remaining months of this year and therefore not in a position to be forced to accept low prices offered. Manufacturers using combed yarns are reported as being in a good position so far as goods orders are concerned which leads several to look for a strong market for the rest of the year, several large spinners in this group being reported as being well sold ahead and unable to accept further orders of importance for this period. While it is not their intention to advise customers to speculate in either carded or combed yarns by ordering far ahead of their requirements, the opinion is held that th

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Cotton Yarns *of* Quality

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The customer having accurate knowledge of costs, from yarn to finished product, is daily impressed with the actual *Net* saving from the use of *CANNON QUALITY* yarns.

Perhaps this explains why we enjoy the continued and increasing patronage of *America's Foremost Manufacturers.*

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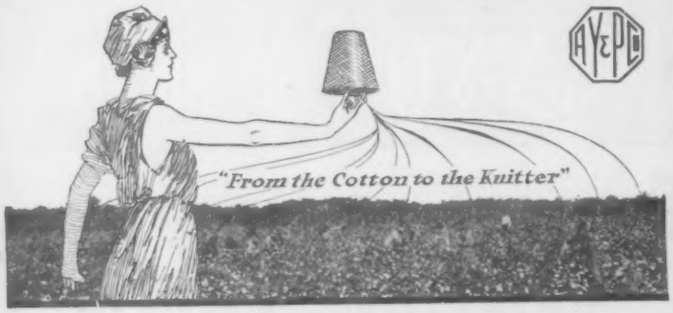

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of

High Grade Combed and Carded Yarns

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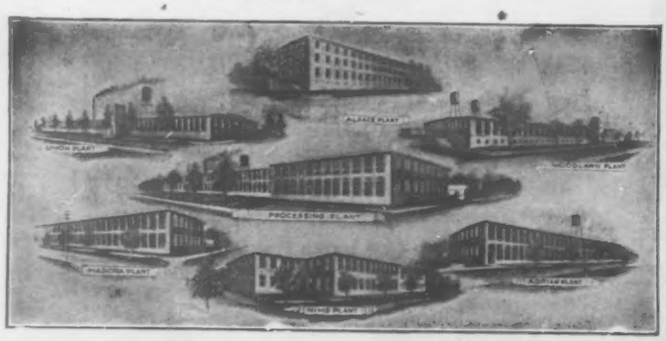

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HONESTLY that with our 63 years' experience and our practically unlimited facilities, we are equipped to handle the most intricate Dyeing, Bleaching or Mercerizing job.

BUT—We'd rather *Show* you!

May we have your next order?

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Dyers, Bleachers and Mercerizers
Kinsey & Worth Sts.
Frankford, Pa.

Cotton Yarns—Continued

present offers opportunities to order ahead conservatively, even granting that the bottom has not yet been reached.

Increased Weakness

Prices Largely Nominal as Result of Slow Demand

BOSTON.—Lack of demand is as largely responsible for the decline in raw cotton prices as prospects of another large crop, and the continued sagging of yarn prices is traceable to the same cause. Yarn users are covering only their positive near needs and such demand is too small to give the market any real support. Prices of coarse count carded yarns are headed for the low basis ruling early in the summer and some counts have approached that basis very closely. Rather more resistance to depressive influences is shown on medium and fine counts, but the market on combed and fine count carded yarns as well as on mercerized yarns has not been sufficiently tested to show what is the present basis of values. Prices of the latter classes of yarn are purely nominal, but in view of the fact that prices of staple cottons have suffered a greater decline than those of short cottons it would not be surprising if a real test of values should prove that combed and fine count yarns are relatively lower than medium and coarse count carded yarns.

Cotton Dominates Market

The course of the yarn market during the last two weeks has demonstrated the truth of the statement in these columns Sept. 11 that the yarn market was dominated by the cotton market. The following is a quotation from that issue: "The fact must not be lost sight of that the advance in cotton had as much to do with advancing yarn prices as did any increase in demand, and a market that is based largely upon cotton fluctuations is likely to be highly speculative and uncertain during the next few months. Prices are not firmly stabilized at advances and are not likely to be until consumption more nearly approximates production."

It is true that spinners are much better covered with orders than they were prior to the recent advance, and are in a better position to demand prices that will cover cost plus a fair profit. On the other hand, it is a fact that the majority of spinners are still bearish on cotton and are looking for a 12c market. Instead of buying on a scale-down they all are apparently expecting to get in at the bottom. This being their attitude they cannot criticize legitimately yarn buyers who are following a similar policy.

Remove Charlotte Office

Schell, Longstreth & Co., of Philadelphia, yarn commission merchants, have moved their Charlotte, N. C., office to 610 Johnston building. A. M. Fairley, Jr., is in charge of the Charlotte offices.

Waste Activity Retarded

Official Crop Estimate Unsettles Cotton Waste Market

BOSTON.—The cotton waste situation is less encouraging. Activities slowed up very considerably following publication of the crop estimate. Up to that time consumers of wastes had lost full control of the situation and were unable to dictate prices either to contractors or commission sellers. They are again in the saddle with the market unsettled. The official crop estimate blacked both eyes of the waste market. The condition was given as 59.5% of normal or an estimated crop of 15,810,000 lbs. which by the way was 600,000–800,000 bales larger than some of the best commercial forecasts. Spot cotton closed down at 15.05c, a loss of 140 points as compared with the closing of the previous day.

The worst thing about a declining cotton market is that it confirms waste users in their niggardly hand-to-mouth method of buying supplies. They imagine a further slump may take place and mentally hold themselves in readiness to take advantage of any such decline; but in the majority of cases when such an opportunity arises prospective buyers continue to wait and in most instances purchase additional material later at higher prices.

Imports of cotton waste into Boston for the month of July amounted to 546,000 lbs., from Great Britain coming 306,000 lbs. with an average value of 5.8c per lb., from Germany 87,000 lbs. at 7c, and from Canada 68,000 lbs. at 6½c. Other consignments arrived from France and the Netherlands. Exports of waste for the month were surprisingly large totaling in all 1,006,000 lbs. of which amount 412,000 lbs. went to Great Britain at an average value of 14.2c, to France 282,000 lbs. at 9c, to Belgium 206,000 lbs. at 5.5c and to Germany 95,000 lbs. at 10.8c. Exports of cotton waste from Philadelphia the same month were very small, 4,400 lbs. only consigned to the Continent and valued 7.8c per lb.

Current Quotations

Peeler comber	12½—13c.
Peeler strips	10 —10½c.
Egyptian comber	10 —10½c.
Choice willowed fly	5½— 6c.
Choice willowed picker	4 — 4½c.
Sak. strips	15 —15½c.
Linters (mill run)	5 — 5½c.
Spoolers (single)	13½—14c.
Fine White cop	12 —12½c.

Quiet Yarn Market in Chattanooga

CHATTANOOGA, TENN.—The local yarn market continued comparatively quiet with no change in quotations during the week ending Sept. 25. The Government cotton condition report apparently had no stimulating effect upon the market in spite of the fact that some mill men anticipated that a larger volume of orders would follow this report.

Mercerized yarns in 60s-2 are still being quoted at 85 to 87c per pound and 10s singles is quoted at 30 to 31c.

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COTTON YARNS
77 SUMMER ST. BOSTON, MASS.

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For uniformly satisfactory
Weaving—COTTON YARNS—Knitting
Sold by
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are Good Yarns
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DOUBLE MERCERIZED SPECIAL PROCESS

The Chip that was Knocked Off—

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It suffices to say that Belmont mercerizing is making the grade. We are proud to say that Lineberger-Stowe is Belmont and Belmont is Lineberger-Stowe.

Belmont Yarns are the finest of combed yarns mercerized in a plant ideal. Specify them!

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(LINEBERGER-STOWE MILLS)
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High Class Mercerizing in warps only — Fast Colors A Specialty

A new plant, latest and most modern machinery and equipment, backed by thirty-five years of specialized experience, guarantees service and satisfaction.

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Dyers, Bleachers and Mercerizers of Cotton Yarns, Warps or Skeins
ABSOLUTELY FAST COLORS

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Manufacturers of
MERCERIZED COTTON YARNS Give the high Silk-like lustre
In Knit Goods and Woven Fabrics
NOVELTY YARNS Poucle, Bourette and Spirals in Cotton, Wool, Worsted, Mohair and Silk.
COTTON WARPS On Beams, Jacks, Spools and Tubes In Fancy Twist, Colors and Printed

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COTTON

Cotton Steadies Around 14c Level

Firmer Technical Position Leads to Rallies as Hedge Selling Slackens—Uncertainties Attracting More Attention

THE Government report placing the crop prospect as of Sept. 16 at 15,810,000 bales was not only far above average expectations, but evidently was accepted by the trade as pointing quite conclusively to a surplus supply. It was admitted that there were still uncertainties of considerable importance before the crop including the possibility of storm damage, and that of an early killing frost. With a mid-September prospect nearly 2,000,000 bales in excess of last season's world's consumption of American lint cotton, however, it was felt that there was a considerable margin for late season losses, and that the problem of values had been pretty much reduced to that of determining a price at which an increase in the world's carry-over might be absorbed and carried. Under these circumstances, the tropical storm damage which occurred in some eastern belt sections shortly after the date of the last Government report, came in for very little consideration, nor did unfavorable weather conditions in parts of the western belt create much buying power. The market, indeed, seemed to be entirely dominated by the increased estimates of the yield, and the increasing volume of southern hedge selling. Before the decline started by the crop figures was more than momentarily checked, prices broke to 14.15 for December, touching that figure on Tuesday when the market was about 410 points below the high price of Sept. 8. Since then rather a steadier tone has developed partly as a result of the firmer technical position, while covering has been stimulated by heavy rains in the Southwest and scattering reports of smaller spot offerings in the interior.

With prices at the lowest levels they have reached in the market here since the summr of 1921, and with the peak of the new crop movement still ahead, southern bankers, merchants and growing organizations have been discussing measures for stabilizing the market. At a meeting held in Dallas toward the end of last week, it was proposed that a fund of $100,000,000 be raised for the purpose of making loans to farmers to enable them to retire a million bales of the Texas crop from market, with the loans contingent upon pledges to reduce the acreage planted next season. Similar plans are being discussed in other states.

The next Government crop report is scheduled for publication on Oct. 8, and will give the indication as of Oct. 1. This report, of course, will take into consideration such damage as may have been done to the crop by the tropical storm in Georgia and Alabama, together with parts of Louisiana and Mississippi. It will also reflect the more recent rains in the Southwest, and the mid-week drop in temperatures.

The following table shows wednesday's closing quotations in the leading spot markets of the country, with the usual comparisons:

Market	Sept. 22	Sept. 29	Ch'ge	Last year	Sales
Galveston	15.85	14.65	—120	23.00	4,937
New Orleans	15.66	14.43	—123	22.60	99,110
Mobile	15.10	13.75	—135	22.30	1,769
Savannah	15.19	14.00	—119	22.65	10,866
Norfolk	15.38	14.13	—125	22.88	4,027
New York	16.45	15.20	—125	23.30	2,967
Augusta	15.06	13.88	—118	22.44	9,316
Memphis	15.50	13.75	—175	23.25	20,000
St. Louis	15.75	14.00	—175	23.25	.....
Houston	15.80	14.55	—125	22.95	81,498
Dallas	14.95	13.70	—125	22.90	139,254

The following differences on and off middlings are given as compiled from the reports received by the New York Cotton Exchange. The cotton grades marked ** are not delivered on contract.

	Dallas	Memphis	Montgomery	Augusta	Average
WHITE GRADES					
M. F	1.25†	1.25†	1.05†	.83†	1.07†
S. G. M	*1.00†	1.00†	.90†	.68†	.85†
G. M	.75†	.75†	.75†	.53†	.62†
S. M	.50†	.50†	.50†	.38†	.42†
S. L. M	1.25*	1.50*	1.25*	1.25*	1.13*
L. M	3.25*	3.50*	3.50*	3.00*	2.98*
S. G. O.**	5.25*	6.00*	5.50*	4.50*	4.80*
G. O	6.50*	7.50*	7.00*	6.00*	6.23*
YELLOW TINGED					
G. M	.75*	1.00*	.50*	.50*	.75*
S. M	1.00*	1.50*	1.00*	1.00*	1.22*
M.**	2.50*	3.00*	2.50*	2.50*	2.78*
S. L. M.**	4.00*	4.50*	4.00*	4.00*	4.10*
L. M.**	6.00*	6.50*	5.50*	5.50*	5.62*
YELLOW STAINED					
G. M	2.25*	3.00*	*2.00*	2.00*	2.32*
S. M.**	2.75*	3.50*	*2.50*	2.50*	2.87*
M.**	4.00*	4.00*	3.25*	3.25	3.58*
BLUE STAINED					
G. M.*	2.50*	3.00*	2.00*	2.00*	2.22*
S. M.**	3.00*	3.50*	2.75*	2.75*	2.99*
M.**	4.00*	4.00*	3.75*	3.75*	3.88*

*Off middling † Middling.

COTTON STATISTICAL DATA
(Fluctuations of Futures)

	Closed Sept. 23	For week High	For week Low	Closed Sept. 29	Net Ch'ge
October	14.43	15.73	13.91	14.58	+.15
November	14.65	14.79	14.20	14.60	—.05
December	14.65	15.92	14.15	14.63	—.02
January	14.75	16.03	14.24	14.72	—.03
February	14.86	15.02	14.61	14.82	—.04
March	14.97	15.39	14.47	14.92	—.05
April	15.06	15.30	14.74	15.01	—.05
May	15.16	16.55	14.70	15.11	—.05
June	15.23	16.00	14.92	15.19	—.04
July	15.30	16.60	14.86	15.27	—.03

SPOT FLUCTUATIONS FOR WEEK
(Middling)

	New York	New Orleans	Liverpool
Friday, Sept. 24	15.15c	14.58c	2.43d
Saturday, Sept. 25	15.25c	14.58c	2.43d
Monday, Sept. 27	14.80c	14.24c	2.42d
Tuesday, Sept. 28	14.70c	14.13c	2.20d
Wednesday, Sept. 29	15.20c	14.43c	2.07d
Thursday, Sept 30	14.90c	14.20c	2.09d

SPOT FLUCTUATIONS AND STOCKS

	Prices Sept. 29	Stocks This week	Stocks Last year
Galveston	14.65	308,610	274,281
New Orleans	14.43	213,517	303,321
Mobile	13.75	22,182	35,345
Savannah	14.00	137,694	165,605
Charleston	.....	73,331	51,517
Wilmington	.....	15,490	15,901
Norfolk	14.15	42,434	32,926
Baltimore	14.50	746	1,841
Augusta	13.88	71,665	80,921
Memphis	13.75	150,707	76,754
St. Louis	14.00	10,867	991
Houston Port	14.55	355,601	392,848
Little Rock	14.40	43,276	28,259

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Quissett Yarns keep costly knitting interruptions at low ebb. It is not difficult to understand why these yarns of quality are the choice of a host of progressive knitters.

Samples tell Quissett's story. *Write.*

Carded and Combed Cotton Yarns in all Numbers and Descriptions.
Ply Yarns our Specialty.
Egyptians, Sea Island, Peelers, Sakelarides, Pimas and Peruvians.

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New Bedford, Mass.

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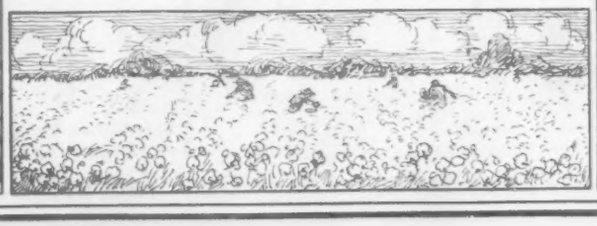

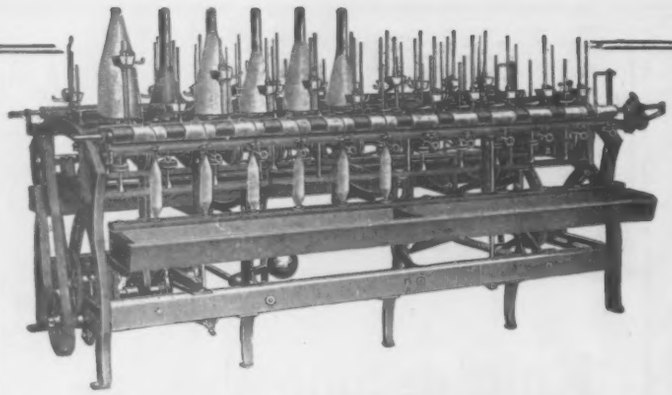

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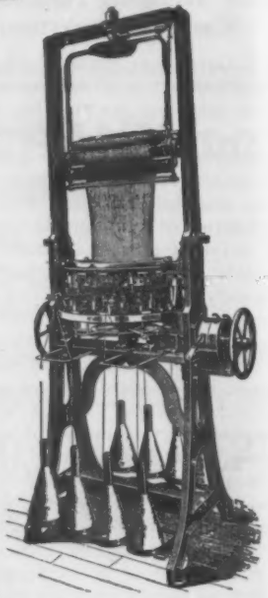

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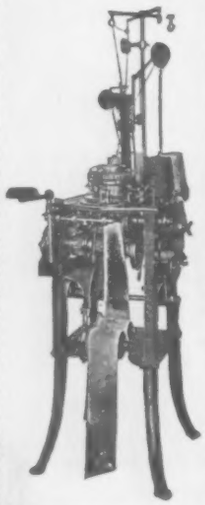

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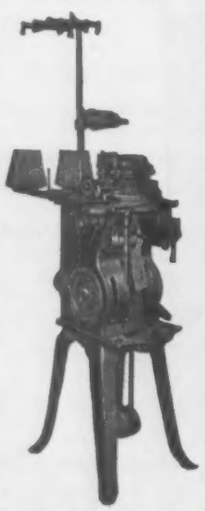

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Our flat machine is adapted for knitting collarettes.

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This machine is made in sizes from 13" to 26" in diameter of any desired gauge, the number of feeds depending on the size of cylinders. Also built in sizes from 2½" to 32" in diameter for the production of a great variety of fabrics.
Aside from the feeds for plain fabrics, the stockinet, elderdown and astrachan feeds are superior to any on the market.

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Made in sizes from 7⅝" to 20⅝" inclusive, of any desired gauge; these measurements being back to back of cylinder needles.
The fabrics from this machine are used for bathing suits, theatricals and athletic goods.
These machines are second to none on the market.
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CRANE MANUFACTURING CO., Lakeport, N. H.

Cotton—Continued

Trade in South Slowed Down

Government Cotton Report of Last Week Demoralized Market

MEMPHIS, TENN., SEPT. 27.—The cotton market here was demoralized by the Government report Thursday, but seemed to be regaining its bearings as the week ended. Business slowed down perceptibly early in the week, owing mainly to diminished demand, because of belief or fear that the Government would raise its figures. A top figure of 15,600,000 was expected, with average expectation running close to 15,250,000 bales. While the disposition is to question the estimate of 15,810,000 bales and to regard it as a possibility more than a probability, that attitude has not affected offerings to a great extent.

Most farmers find it necessary at this season to sell some cotton to provide cash for pickers or for other immediate needs, but obligations incurred in planting and cultivating the crop do not mature until about Nov. 1; so, urgent demands by creditors are not likely before that date, so long as the collateral is intact. In the meantime there seems to be hope or belief that it will become apparent that the Government is wrong. Some think the crop will not be harvested at these prices and even now numerous landowners are worried over the disposition of negro tenants to abandon their crops; these tenants have already received as much, or more, by way of advancements than they can expect to obtain for their crops, unless there is an upturn in prices, if fully harvested. If, as many claim, and as is probably true, cotton prices are now below average cost of production, harvesting assumes the aspect of a salvaging operation and salvaging often pays where otherwise there would be total loss. Staples have shared the decline about equally with shorter cottons but the basis is maintained.

Sellers are trying to get 18 to 18½c. for 1⅛-in. strict middling staples and 20 to 20½c. for 1 3/16-in.; 1¼-in. staples will be very scarce, and some holders think should command 30c., at least. There have been a few sales but hardly enough to establish values. The staple crop will probably fall short of last year's by 35 to 40%. Weather conditions during the week were very favorable, but the two principal things to be feared are an early frost and a rainy spell.

Slump in Staple Cottons

Extra Staples Show Greater Weakness Than Ordinary Cotton

BOSTON, Sept. 29.—The decline in prices of domestic extra staple cottons of practically all grades has been somewhat greater than that in cotton futures as the result of an accompanying decline in basis that in some cases has exceeded 100 points. Business was not strengthened by today's advance in futures and the market closed at the lows for the week. Premium cottons shorter than 1⅛ in. have been relatively stronger on basis than extra staples although basis on high grades is considerably lower than prior to the decline. The Egyptian market touched the low of the present slump yesterday and has recovered relatively more than domestic futures.

Some idea of the basis position on extra staples of different grades may be gained from the fact that full 1 3/16 in. hard western cotton of strict good ordinary grade has been offered as low as 100 points on December, middling has sold as low as 575 points on December and good as low as 700 points on December. Basis on extra staples of lower grades than middling is demoralized, while most shippers are now free sellers of middling and better grades at current market prices, although on basis for the better grades there is frequently a range of 100 to 200 points between price ideas of shippers.

The Alexandria market touched the bottom of the present decline yesterday when October Uppers sold down to $19.60 and November Sak. to $29.35. The October option reacted today to $20.40 and the November option to $30.53. The October and December option closed at identical prices, but January Sak. closed at $29.98.

Current Quotations

Average prices for Oct-Nov. shipments of middling and strict middling hard western cottons (Government lengths) are as follows:

	Middling	St. Middling
1 1/16 in.	17 to17½c.	18 to19c.
1 1/16 in. to ⅛ in.	18 to18½c.	19 to20c.
1 ⅛ in.	19 to19½c.	20 to21c.
1 3/16 in.	21 to21½c.	22 to23c.
1 ¼ in.	24 to26c.	25 to28c.

Basis on N. Y. Dec. 14.63c.

John Malloch & Co., Boston, quote Egyptian cotton, c. i. f. Boston for Nov.-Dec. shipment as follows: Medium Sakellarides 32⅛c, off 2½c, Medium Uppers, 23c, off 1½c, from Sept. 22. They report closing prices Sept. 29 on the Alexandria exchange as follows: Oct. Uppers $20.40, off $1.02; Nov. Sak. $30.53, off $2.19 from Sept. 22.

Market Statistics

Basis Middling

	Saturday, Sept. 25	Saturday, Sept. 18
10 markets average	14.37	15.84
Memphis	14.50	16.50

Premium Staples

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices
1⅛-in.	17¾@19c
1 3/16-in.	19¼@20½c
1¼-in.	25 @27c

Current Sales

	For week	Prev. week	Week before
Memphis total	17,050	9,750	5,200
F. o. b. included in total	13,450	7,850	4,525
10 markets	172,441	205,165	137,867

Memphis Receipts, Shipments, Etc.

	For week	Last year	Year before
Net receipts	20,341	30,606	5,658
Gross receipts	23,423	49,439	12,572
Total since Aug. 1, net.	34,064	72,616	10,271
Shipments	19,595	27,506	9,007
Total since Aug. 1	136,184	71,132	49,680
Total stock	131,735	63,393	26,377
Increase for week	13,827	21,983	3,565
Unsold stock in hands of Memphis factors	51,500	36,000	.....

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Mercerized Yarn

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YARNS

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SPINNERS and PROCESSORS
General Office
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BOSTON, MASS. Allan B. Greenough 45 Milk St.
UTICA, N. Y. Dalglish & Co., Utica City Nat'l Bk. Bldg.
LOS ANGELES, CALIF. J. V. Calhoun, P. O. Box 1566, Sta. C.
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Sole Representatives for Great Britain

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CHICAGO, ILL. Fred W. Frank, 166 West Jackson Blvd.
CHARLOTTE, N. C. Acme Sales Co., 906 Johnston Bldg.
TORONTO, CANADA Slater & Co., 53 Yonge St.
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WORSTED YARNS

Strong Wools Force Up Prices of Tops

Tops Grading from 56s to 64-66s Up 2c for Week—Noils Firm Without Advancing

BOSTON, MASS.—A strong wool market and the difficulty topmakers are finding in uncovering topmaking wools at reasonable prices has again compelled some of the leading combers to advance their asking prices. All grades of domestic tops from 56s to 64-66s have been advanced 2c per lb. There has been a fair but spotty interest shown in the market during the last few days and it has been possible in some cases to obtain $1.40 for fine tops. Half bloods have been sold at $1.27½ but $1.30 is said to be the lowest price at which further business will be accepted. There has been further business placed in fine French tops also in 56s and 46s on the Bradford system. Interest in medium wools particularly the ⅜s blood grade has depleted the available stocks quite considerably and although high ⅜s blood tops have sold during the week around $1.12½ at least one topmaking concern has refused to consider further business under $1.15. Knitting interests are still willing to place substantial business on a 93-95c basis for 50s top with 97-98c asked by standard topmakers.

There is a fair demand for white noils at a price, but the mills set the price. These commodities are now lagging behind their producing top market as well as the parent wool market. Whether this can continue much longer is dependent less perhaps on the top and wool markets than upon the character and extent of the business placed by the goods market in woolen fabrics. It is evident that no lifting of values will be acceptable to manufacturers. Some choice fine Australian noils were sold on the street at 85c but for domestic noils 78-80c is the ruling quotation with the mills operating the lower figure.

Top and Noil Quotations

Tops—Boston	
Fine (64–66s)	$1.40–$1.42
Super 64s Aus.	1.54– 1.55
Half-blood (60–62s)	1.30– 1.32
High ⅝ blood (58s)	1.15– 1.16
Aver. ⅝ blood (56s)	1.10– 1.12
Low ⅝ blood (52–56s)	1.02– 1.03
High ¼ blood (50s)	.97– .98
46s	.90– .91
44s	.85– .86
40s	.82– .83
36s	.82– .83
Tops—Bradford	
Fine (70s)	54d
Fine (64s)	51d
Half-Blood (60s)	45½d
Three-eighths blood (56s)	34d
Quarter-blood (50s)	26½d
Cross-bred (46s)	22½d
Noils—Boston	
Fine	$.80– $.82
Half-blood	.71– .73
High ⅝ blood	.63– .68
Aver. ⅝ blood	.60– .65
Low ⅝ blood	.55– .60
High ¼ blood	.53– .55
46s	.50– .51
44s	.48– .50
40s	.47– .49

Cooperative Effort Still Needed

Spotty Improvement Among Spinners and Low Yarn Prices Show Need of Readjustment

PHILADELPHIA.

THAT there was and still is a need for cooperation among spinners is illustrated by the wholehearted support given to the Wool Publicity Committee and later to the Wool Council of America, both having received the unqualified support of the National Association of Worsted and Woolen Spinners as well as of many individual spinners of the country. When these movements were first started the entire woolen and worsted industry was feeling the ill effects of a sustained period of lack of demand for their products, affecting spinners as much or more than any other branch of the trade. Due to this unsatisfactory condition of their business, spinners among others, were enthusiastic in their support of the new council which was formed as a stabilizing influence in the industry.

Spinners Not Benefited

Since that time conditions have improved to a degree that would have been felt impossible at the time the first cooperative movement was started this year, a large measure of this being due, many are ready to admit, to the fact it was proved that the industry had made up its mind to cooperate for the good of all. Many spinners now have a good volume of forward business on their books and several are running two shifts a day to keep abreast of new orders; but a majority assert they will be no better off financially so far as this business is concerned after it has been filled, the only advantage being to those who have been enabled again to build up their organizations, broken during the long period of small demand and now are in a better position than their competitors, who have been working only part time.

This unevenness of operating conditions among spinners is particularly noticeable since the improvement in demand started. Certain spinners are running more than one shift a day and are booking a fair volume of business each week from weavers and knitters, while many of their competitors making similar yarns are either closed down completely or are running part time. Business taken since conditions started to improve has been unequally distributed, going to the lowest priced spinner at figures considerably under what others state is absolute cost to them. It is fairly generally recognized that spinners had little margin to work upon when improvement in demand first got under way and this has since grown smaller by advancing raw material costs, yarn prices remaining unchanged.

Yarn Prices Unchanged

Many assert this condition is temporary and always seen when business first starts to pick up and these low priced spinners will in the immediate future be forced to raise prices after they have booked all the low priced business they can afford to accept. At this time it is felt that other spinners who up to the present have been unable to compete with these low prices, will be in position to secure a part of this business at higher figures than others received, and in the final analysis will be in a better position than spinners who have been selling below cost. Many in the trade feel this condition in the yarn market is rapidly approaching.

Even if this does occur it will not minimize the fact that spinners as a group have not been able to take full advantage of the improvement in demand for woolens and worsteds. A relatively few have benefited by figuring closely on orders and lowering their overhead by running two shifts a day; but the average spinner is no better off financially than before improvement in demand for their product first started, a majority asserting prices at which they have been taking business to date are prohibitively low and impossible for most of them to accept. Such a condition points to the lack of what the industry has set out to accomplish, namely, cooperative effort.

This does not mean competition will be less keen but it would have meant had the cooperative program been further advanced, that yarn prices would have probably followed the wool market more closely or advanced somewhat when improvement in demand got under way and spinners as a group would have had this difference in their favor instead of taking yarn orders at prices as low as three months ago. Spinners are in favor of stabilization at prohibitively low figures which are impossible for a majority in the trade to accept and represent only approximate cost to others.

Wrong Viewpoint Held

Since improvement in demand started it has been noticeable that less has been heard in the trade of cooperation, several believing that as conditions improve there is less and less need of such a program, and for this reason they feel there is not so great a need for any such body or program as has already been decided upon. The present unsatisfactory condition of the majority of spinners of yarns disproves this viewpoint, as they find their position little better after having booked this larger volume of business than before.

Many in the trade believe that such conditions will not be felt so keenly when the entire industry is working along cooperative lines such as the Wool Council is endeavoring to effect and that the need of such effort grows greater as business expands rather than the contrary. In other words, full benefits from improvement will not be possible until cooperation along lines suggested has been accomplished, which in turn will tend to make this betterment more permanent.

WORSTED YARN QUOTATIONS

(Corrected to Close of Business Wednesday)

Bradford System	
2–12s, low com. (36s)	1.05–1.10
2–16s, low com. (36–40s)	1.10–1.15
2–20s to 2–24s, low ¼ (44s)	1.15–1.20
2–20s to 2–26s, ¼ bld. (46–48s)	1.25–1.30
2–26s to 2–30s, ¼ bld. (48s)	1.30–1.35
2–30s to 2–32s, ¼ bld. S. A. (46s)	1.35–1.40
2–32s, ¼ bld. (48–50s)	1.40–1.45
2–20s, ⅜ bld. (56s)	1.45–1.50
2–26s, ⅜ bld. (56s)	1.50–1.55
2–36s, ⅜ bld. (56s)	1.55–1.60
2–32s, ½ bld. (60s)	1.70–1.75
2–36s, ½ bld. (60s)	1.75–1.80
2–40s, ½ bld. (60–64s)	1.80–1.85
2–50s, high ½ bld. (64s)	1.95–2.00
2–50s, fine, (66–70s)	2.00–2.05
2–60s, fine (70s)	2.65–2.75

French System	
20s, ¼ bld. (48s)	1.40–1.45
20s, high ¼ bld. (50s)	1.50–1.55
20s, ⅜ bld. (56s)	1.55–1.60
30s, ⅜ bld. (56s)	1.65–1.70
30s, ½ bld. (60s)	1.80–1.85
40s, ½ bld. (60–64s)	1.90–1.95
50s, (66–70s)	2.15–2.20
60s, (70s)	2.65–2.70
Knitting Yarns in Oil (Bradford)	
2–20s low ¼ bld. (44s)	1.15–1.20
2–18s to 2–20s ¼ bld. (50s)	1.25–1.30
2–26s, ¼ bld. (50s)	1.30–1.35
2–30s, ¼ bld. (50s)	1.35–1.40
2–20s, ⅜ bld. (56s)	1.50–1.55
2–20s, ½ bld. (60s)	1.75–1.80
French Spun Merino White	
30s, 50–50	1.50–1.55
30s, 60–40	1.60–1.65
30s, 70–30	1.70–1.75
30s, 80–20	1.80–1.85

Struggling Yarn Market

Raw Material Push Upward—Fabric Push Downward

BOSTON.—There is an upward tendency in the worsted yarn market brought about by strong wool and higher tops but still held in firm check by yarn users who are resisting all advances. The market is still somewhat of a conservative affair particularly as the call for mixtures and novelties seems to have displaced some of the business expected on the finer counts of white yarns. Lower prices are constantly being named by consumers and repeat orders are offered on a lower basis than original pur-

Only a Bright Silk Thread—
but it sold the Worsted Fabric

It is hard to over-estimate the added salability of woolens and worsteds decorated with dependable American Colored Spun Silk Yarns—and the cost is but a trifle.

Resist
Extra Fast
and
Regular
Dye
Colors

Let us know your requirements.

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Providence, R.I.
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"Always Dependable - All Ways"

Worsted Yarns—Continued

chases which shows either that mills using yarns are out of touch with the raw material situation or else that acquainted with it they are themselves hard pressed by buyers of the finished fabrics. Spinners as a whole are not yet able to obtain yarn prices compensatory for advances in wool and top values. French spun yarns are moving with relative freedom and Bradford 2-36s to 2-30s are in fair demand.

In the Bradford market quotations are firm in keeping with the advance in tops but competition for business is keen and checks the tendency to higher values. Much of the business placed is said to be speculative and specifications as to delivery are slow. Fine yarns are suffering from disturbed conditions in the East. The larger part of the Botany yarn orders placed recently has been on medium counts. Crossbred yarns are doing a little better. Two-ply 60s made from super 70s are up 1 penny per pound.

BRADFORD YARN PRICES

	s	d
2-16s, 36s	2	1½
2-24s, 44s	2	4½
2-36s, 58s	4	4
2-48s, 64s	5	7
2-60s, 70s	6	10

Wool Council Constitution

(*Continued from page 64*)

Article VIII

Meetings

The Annual Meeting of the Council shall be held on the third Tuesday of January of each year at a time and place to be designated by the Executive Committee, or on such other date and at such other place as the Executive Committee may appoint. Notice of the Annual Meeting shall be given at least thirty days in advance.

Special meetings of the Council and meetings of the Board of Directors may be called by the President and shall be called by the President or Secretary upon request of twenty members of the Council or eight members of the Board of Directors. Notices of such meetings shall be sent at least ten days in advance.

Article IX

By-laws

By-laws may be adopted and amended by the Board of Directors.

Article X

Amendments

The Articles of Association may be amended at any annual or special meeting of the Council by a majority vote of members present, provided notice of intention to offer the amendment with a copy thereof is mailed to each member at least thirty days before such meeting.

New Bedford School Evening Classes Start

NEW BEDFORD, MASS.—The New Bedford evening classes started last Monday with more than 800 students enrolled for the courses. The machine shop, drawing-in class and the plain loom fixing class appear to be the most popular with the students. Enrollment will continue through next week. The day class enrollment has passed the 80 mark, which is well up to past years, and considered very satisfactory in view of the conditions in the textile industry.

August Activity of Wool Machinery

WASHINGTON, D. C.—The Department of Commerce has announced statistics on active and idle wool machinery for August, 1926, based on reports received from 930 manufacturers, operating 1,107 mills. This is exclusive of 10 manufacturers, operating 18 mills, who failed to report for the month. According to reliable textile directories for 1925, these non-reporting mills are equipped with about 3,094 looms, 184 sets of woolen cards, 97 worsted combs and 181,582 spindles. The accompanying table gives the percentages active, and comparative figures for July, 1926, and August, 1925:

Month	Looms: Wider than 50 in. reed space	Looms: 50 in. reed space or less	Looms: Carpet and rug	Sets of cards	Combs	Spinning Spindles: Woolen	Spinning Spindles: Worsted
PER CENT OF TOTAL NUMBER OF MACHINES ACTIVE							
Aug., 1926.	56.2	62.6	66.5	71.2	74.0	67.7	66.2
July, 1926.	54.8	63.5	64.8	73.5	66.9	68.7	60.3
Aug., 1925.	63.8	70.3	71.9	80.2	75.2	77.6	68.1
PER CENT OF TOTAL HOURS ACTIVE (MAXIMUM SINGLE-SHIFT CAPACITY)							
Aug., 1926.	55.5	54.7	60.1	70.5	73.8	66.7	66.3
July, 1926.	52.6	52.6	54.9	67.7	67.8	65.9	55.7
Aug., 1925.	62.9	57.4	68.1	81.8	77.2	79.3	64.7

Pepperell to Make Line of Silk Goods

BIDDEFORD, ME.—Russell H. Leonard, treasurer of the Pepperell Mfg. Co., has announced that definite plans are being made for the local plant to engage extensively in the manufacture of high grade silk goods. The new department will not affect the output of the new Lady Pepperell sheeting upon which 70% of the broad looms of the company are operating and for which so many orders have been received that a night crew of 500 additional hands was put on Sept. 27.

Experiments in the silk work have been going on for several months and will necessitate expenditures for equipment before the actual manufacture of the new product is commenced. The styling department has already been established at the company's Opelika (Ga.), plant.

The Pepperell is also now turning out a fine quality of broadcloth shirting, manufactured at the mills here and finished at the Lewiston plant. Lady Pepperell sheeting will be introduced in England this month.

New York Industrial Congress to Meet Nov. 29 to Dec. 2

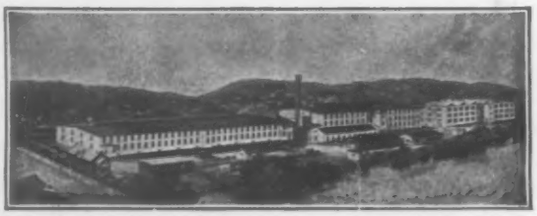
ALBANY, N. Y.—The annual Industrial Congress of the State Department of Labor will be held at Rochester on Nov. 29, 30 and Dec. 1 and 2. At this year's meeting special attention will be given to a campaign to eliminate accidents in industrial plants.

Pocasset Worsted Company, Inc.

Worsted Yarns

Office and Mills — Thornton, R. I.

MERION WORSTED MILLS



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Woolmix is made in a variety of grades according to your specifications. Let us tell you more about it.

THOMAS HENRY & SONS INC

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WORSTED AND MERINO FRENCH SPUN YARNS FOR KNITTING AND WEAVING

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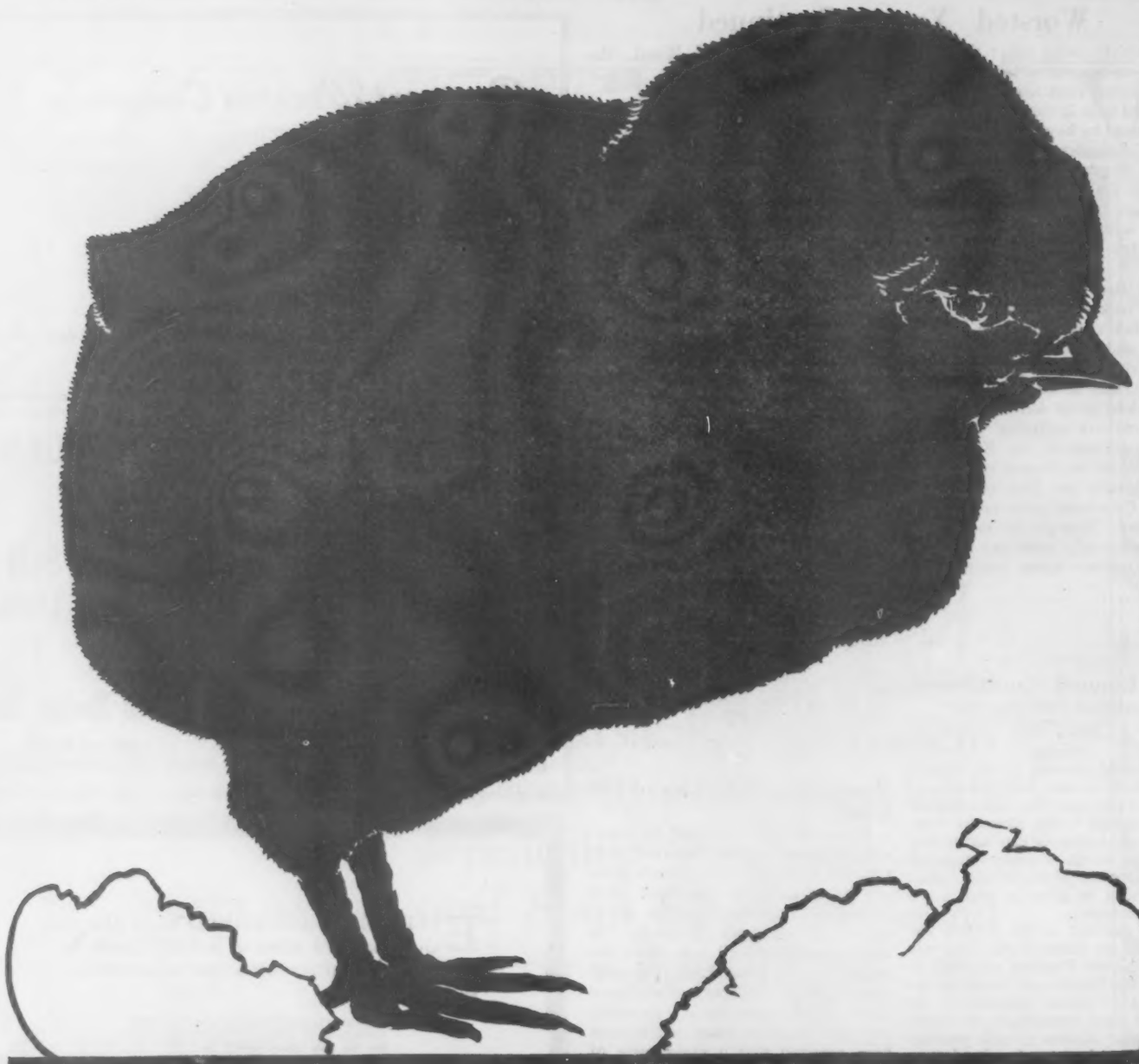

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DU PONT RAYON CO.

BUFFALO, N. Y.

RAYON AND SILK YARNS

Rayon Enters Last Quarter Confidently

Business has Improved Steadily Since Price Cut—Price Confidence Found

With the trade ready to enter upon the fourth and final quarter of 1926, it is pleasant for producers and sellers to realize that the most important feature of any market, price confidence, is present in rayon. While buyers believe, and probably with reason, that in certain quarters the regular list can be bettered, there is a growing appreciation that it will take something extraordinary to permit rayon to be sold much under present levels. With the new crop of companies brought out by the boom days having great difficulty trying to make it and sell it at today's market, few can see any radical reduction for years to come.

In spite of this fact it is only in special cases, notably that of the cotton industry, that buyers are willing to place future business of any consequence. During the coming quarter sellers look for an increasing willingness on the part of all buyers to anticipate their needs. Evidence of an improvement in the distribution of certain types of rayon merchandise could be seen in the revision upward on certain numbers by one knit goods house. While the explanation mentioned labor costs, the fact that it could be put into effect testifies to an improved tone to the market. As a general thing buying was somewhat heavier last week, some fair-sized contracts being placed by the hosiery trade.

Rayon Yarn Imported Temporarily Free Into Italy

WASHINGTON, D. C.—By a royal decree-law of July 1 rayon yarn has been added to the list of products which may be imported into Italy temporarily free of import duty in quantities of not less than 100 kilos, if the manufactured product is re-exported within the period of one year, according to a report to the Commerce Department from the office of the Commercial Attache at Rome. It is further provided that the yarn must run 60,000 meters or over per half kilo.

Resigns as Credit Rayon Man

Owing to the consolidation of the credit department of the Industrial Rayon Corp. in Cleveland, E. Wallace Weymann, credit man in New York for the company, severed his connections with that concern, effective Sept. 30. Prior to his connection with the Industrial Rayon Corp., Mr. Weymann was assistant to the treasurer of the Worumbo Co. He is a graduate of a number of courses on accounting and credit.

China Steam Filatures Find Favor

Prices Are Relatively Low as Compared with Japans—Manufacturers Switching to Them in Some Instances

THE attractive prices at which white China Steam Filature silk has been offered lately has been responsible for a rapid increase in the interest evidenced by manufacturers. Figures indicate that America has been increasing her imports of this class of silk for the last four or five years. It took a combination of circumstances, however, to focus attention on the Shanghai grades which have been superseded in late years by Japans. While the imports of China Steams are inconsiderable as compared with Japan silks, there is every reason to believe that the circumstances which have brought them into the limelight will be permanent which in turn should result in increasing use by the American trade.

India's Release of Silver

The low-price level at the present time is the primary factor in causing mills to use them again. It is the reason for the low prices that is of principal interest, though. The announcement of the Indian officials a month or two ago that the Indian Government would gradually work onto a gold basis has caused an important decline in the price of silver metal. India for years has been second only to China as a consumer of silver for coinage purposes, and the intimation that she would curtail her buying of silver and in time release huge quantities on the international market, has naturally had a far-reaching effect on the price. China now remains the only country of importance that remains on a silver basis, and heavy stocks of silver metal have already been accumulated in Shanghai.

The declining exchange has reduced materially the cost of the various grades of China silks, for prices in that country have not yet risen to an extent that would offset the lower exchange. Canton silks have been affected, also the Tussah grades, but chief interest has centered on the various China Steam Filature chops which for some years have been somewhat too high in price to attract American buyers. European buyers have added to the difficulties of buying these grades by competing keenly for them at all times. Of late, however, a lull has come in the European demand and this coupled with the drop in exchange has once again put them within reach.

During August for a short time Three Dancer grade, which includes such excellent filatures in its list as "Single Gold Deer," "Gliding Boat," "Blue Elephant," "Mulberry Tree," and many others, was available below $6 a pound. Even now with the market in China higher to some extent, it can still be bought under $6.20 as compared with a price for Best No. 1/X Japan of $6.25. The very top grades such as "Anchor" and "Factory" can be obtained at $6.70 to $6.75 which compares well with the price of a Grand Double Extra Japan. Moreover, those familiar with the wonderful evenness and cleanness of the two mentioned would hesitate to mention a Grand Double Extra in the same breath. Possibly one or two ten-bale lots out of a year's production might be compared but certainly no general run of silk.

Buying of Chinas Increases

Despite the fact that nine out of ten American manufacturers are unfamiliar with China Steams, heavy buying has been noted in the last four or five weeks. The market abroad has strengthened, but a fresh decline in silver still leaves them relatively low in price. It is the expectation of many that a sagging trend to exchange, barring rallies, for some years to come will keep them in line with Japan silks. It would seem that their use in America should increase during the coming years.

The only difficulty of a technical nature in their use is the fact that they contain more gum than the Japan grades. The presence of this gum makes careful handling necessary particularly in the winding, but an experienced operator can readily loosen the skeins before placing them on the swifts. Other difficulties are that the individual filatures do not reel large quantities each year and that in most cases contracts must be placed for considerable periods in advance. There are, too, differences between the products of different filatures that may cause trouble and in addition in the grades from "Three Dancers" down, the product is likely to vary from lot to lot.

These difficulties, however, should be more than offset by the superior brilliancy and life to the silk itself. Also, with a better knowledge of the requirements of the American market, the minor matters may be eliminated by more careful reeling.

DOMESTIC RAYON PRICES

Denier	"A"	"B"	"C"
55....	$2.55	$2.40	$2.25
65....	2.45	2.30	2.15
75....	2.35–2.50	2.20–2.35	2.05–2.20
80*...	2.50	....	....
85....	2.25	2.10	1.95
95....	2.05	1.90	1.75
100....	2.00 2.15	1.85–2.00	1.70–1.95
100*...	2.35	....	....
110....	1.95	1.80	1.65
120....	1.90	1.75	1.60
125....	2.00	1.85	1.70
130....	1.85	1.70	1.55
140....	1.75	1.60	1.45
150....	1.65	1.50	1.35
150*...	1.80	....	....
170....	1.55	....	....
170*...	1.75	....	....
175....	1.60	1.45	1.30
200....	1.55–1.60	1.45	1.30
200*...	1.70	....	....
250....	1.50	1.40	1.25
300....	1.50	1.40	1.25
450....	1.35–1.45	1.35	1.20
600....	1.45	1.35	1.20
900....	1.35	....	....

* Super extra.

CELANESE	
45	$4 25
75	3 75
100	3 65
120	3 50
150	2 90
170	2 85
200	2 75
250	2 70
300	2 70

Rayon Notes from Britain

(Special to TEXTILE WORLD)

The trade returns for the month of August have now been published and the essential details are given below:

Description	August 1926	July 1926	August 1925
Imported rayon yarn in lbs.	180,144	201,957	113,561
Imported rayon yarn in £	23,781	37,525	28,035
Imported rayon manfrs. in £	285,595	281,595	122,151
Exported rayon yarn in lbs.	341,794	716,825	164,472
Exported rayon yarn in £	93,547	199,348	55,455
Exported rayon manufrs in £	507,892	572,906	248,446

* * *

It is anticipated that in the near future Harbens, Ltd., will issue £150,000 in 6½% debentures. The company is producing viscose silk at Golborne in Lancashire but it is understood that it is their intention to increase output, possibly to two tons per day. This company is a subsidiary of J. Mandleberg & Co., prominent rainproof manufacturers of Manchester. They have had considerable trouble in getting the rayon plant onto an economic basis but appear to be working more satisfactorily now.

* * *

There is likely to be an important announcement shortly from the Nuera Artificial Silk Co., which is building a plant at St. Helens in Lancashire. It is understood that the process to be used has turned out exceptionally well and while it would be premature at this stage to make an official pronouncement, there is every likelihood of success attending the firm. Rumor associates the name of Courtaulds

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COMMISSION DEPARTMENT

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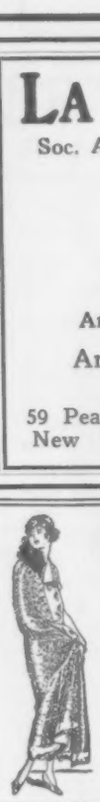

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Rayon and Silk Yarns—Continued

with this company but nothing definite is known.

* * *

The first dividend on the 8% cumulative preference shares in the Bulmer Rayon Co. (formed in the latter part of last year) and due for payment on September 1, has been postponed until the end of the company's financial year. The reason given is the prolongation of the coal strike with consequent unsettlement in the economic conditions of the country. It is understood that progress has been quite satisfactory and that productive capacity is being steadily increased. The company manufactures both collodion and viscose yarns.

* * *

It is now understood that the proposed new factory to be erected at Holywell in North Wales by Courtaulds Ltd. is not to be proceeded with, at least for some considerable time.

Thrown Silk Firmer

Three and Four Thread Crepes Not Specially Good Inquiry

Broad silk manufacturers continued to operate on the three and four thread crepe constructions last week to the exclusion of the other numbers. Many apparently found themselves forced to buy in spite of the slightly higher market. It is believed that large quantities are being delivered against contracts placed some weeks or a month ago and the advance in prices finds the manufacturer the gainer. Little five or six thread is going into work at the present time.

Some large contracts were reported placed in hosiery tram last week. The hosiery mills are still buying and the expectation is that the coming week will see additional contracts placed. Deliveries run up to the end of the year, with a few confident operators willing to consider the spring of 1927. Tram was quiet otherwise. Prices are as follows:

(60 days basis)

Japan Organzine, 2 thd Grand Double Extra in skeins	$7.75
Japan Tram, 3 & 4 thd in skeins	6.85
Japan Tram, 5 thd on cones	6.75
Japan Crepe, 3 thd on bobbins 65 turns	7.45
Japan Crepe, 2 thd XXA on bobbins 70 turns	8.05
Canton Crepe, 3 thd N S 14/16 on bobbins	6.00
Tussah Tram, 2 end on cops	3.50

Spun Silk Stronger

Singles in Better Demand for Futures but Ply Yarns Spot

Improved demand was noted for spun silk yarns last week with both single and ply qualities finding favor with buyers. In some instances manufacturers were placing fairly substantial forward business in singles but the ply yarns were still being bought for immediate although in somewhat larger quantities. Prices were given as very firm. No actual advances were reported but the understanding around the market was that the price situation is stronger than for some time.

(net 10 days)

60-2	$5.75	30-2	$5.25
50-2	5.60	20-2	5.00
40-2	5.45	60-1	4.60

Raw Silk Higher

Japan and Shanghai Silks Advance on Good Buying

Steady absorption of silk by manufacturers in the local market for nearby deliveries together with fairly large advance buying accounted for the rise that took place last week. Japan grades moved up about 10c a lb. while late in the week Shanghai silks rose sharply in response to higher cables from abroad. Mills were in need of silk in many instances due to the fact that many are increasing their schedules at a time when they had planned to be curtailing them. Spot silk appeared to be getting scarce with many grades in small supply. Heavy inroads have been made on importers' stocks of silk in New York by the unexpectedly large consumption during September.

Canton silks moved slightly lower. The 14/16 grades were reported offered at $4.60 in New York by certain speculative houses who are presumably figuring on a lower silver exchange rate to permit them to cover at a profit.

(90 days basis)

Japan Filature, Grand Double Extra	13/15	$6.75
Japan Filature, Crack Double Extra	13/15	6.60
Japan Filature, Double Extra	13/15	6.45
Japan Filature, Best Extra	13/15	6.40
Japan Filature, Extra	13/15	6.35
Japan Filature, Best No. 1/X	13/15	6.30
Canton Filature, New Style	14/16	4.70
Canton Filature, New Style	20/22	4.45
Shanghai Steam Filature, "Anchor" grade		6.80
Shanghai Steam Filature, "Three Dancer" grade		6.25
Tussah Filature, 8 cocoons		3.10

SUMMARY OF SILK CABLES

Best No. 1/X Yokohama	1610 Yen
Exchange at 3 m/s	49¼
Cost C. I. F. New York	$6.28

Prices in Yokohama advanced moderately last week, closing levels being 20 Yen above the previous week. Transactions totalled about 7,000 bales which maintained the steady buying pace noted during September. The greater part of the activity was noted later in the week when exchange fell off slightly to 49¼ as against a recent high of 49½. The Shanghai market was given as much firmer by late cables with buyers eager to contract for the China Steam silk in the grades from Extra C up. Cantons while noting somewhat heavier transactions were slightly lower on the week. One American house, however, is reported to have bought 500 bales on Sept. 28 and in the market for additional quantities.

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Artificial Silk twisted with Worsted

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Perkins & Boland, Inc., 80 Federal St. Boston

Pennsylvania and Southern Representative:
John S. Bowes, 137 Berkley St., Philadelphia

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WOOL

White Softs Advance Sharply

Larger Mill Call Appears for White and Light-Colored Rags and Wastes

Recovered wool manufacturers are receiving additional business in light-colored materials and are themselves inclined to do a little more in the general rag market. Considerable interest has developed in white softs which are in cases selling above 40c per lb. The amount of this material held by domestic graders is very small and additional business placed recently for certain types of tweed fabrics has led to an almost overnight call for additional supplies of all kinds of white materials. Where a mill can use this material without carbonizing it no doubt seems a good proposition at 40c or even better, but if carbonized it would cost 56-58c. There have been fairly large imports of white materials of this class which does not require carbonizing and which can be sold picked at 50-52c.

Some woolen mills are getting rush repeat orders on certain fabrics for men and women's wear and this has led to an outburst of activity which the more skeptical claim will vanish as quickly as it appeared. The rag market is much stiffer than it was. The overnight strength in white softs has stimulated the imagination of the graders. Said one of them "White softs make anything strong." Asked whether the mills would pay 40c he said that they would and might have to pay more than this in the near future as stocks were very small and the demand had cleared out the small accumulations.

Mill wastes are encountering more business but at the old prices or even lower. Users of these materials oppose every advance in value and the fact that they have to pay higher prices for their virgin wool makes them all the more energetic in attempting to beat down prices. According to one producer all kinds of good white material from ⅜s blood up are likely to be scarcer because the bulk of the yarn being produced in many mills was not standard white worsted but mixtures of various colors.

Imports of woolen rags into Boston for the month of July amounted to 778,000 lbs. of which amount 729,000 lbs. came from Great Britain at an average value of 37c per lb. The balance of the import covered small consignments from France, Germany and Canada. Exports of woolen rags for the month were quite small 141,000 lbs. in all of which amount 125,000 lbs. went to Germany at an average value of 6.6c while to Great Britain there went 16,000 lbs. at an average value of 9.9c.

Australian Mill Man Visits Boston

Sir William Vicars Discusses Australian Tariff and Synthetic Wool—Predicts Rising Wool Values

BOSTON, MASS.

COMING from the vast island continent of Australia, only 100,000 square miles less area than the United States, and where in the central part camels are freely used for transport Sir William Vicars, head of the woolen and worsted manufacturing concern of John Vicars & Co., Ltd.; of Sydney, felt quite at home in Boston's wool district where the entire trade has been following for the last week or two the opening of the Australian wool season in his own home town. Sir William was accompanied by Lady Vicars, a niece, Miss Beatrice Hutton and a nephew, Robert J. Vicars, and will spend approximately ten weeks in the United States and leave for home from the Pacific coast.

Knighted in recognition of his work as chairman of the repatriation board of New South Wales and as chairman of the Red Cross division of that State Sir William stated that he saw marked points of similarity between this country and Australia particularly in that both were high wage paying countries and the Governments intent on maintaining for the working classes the best possible living conditions.

The wool trade outing at Tyngsboro furnished a delightful experience to the Sydney visitor and later in the week he had the opportunity of visiting the model community at Shawsheen which reminded him somewhat of the earlier industrial community fashioned on similar lines at Port Sunlight on the Mersey. From Shawsheen to Lawrence is only a matter of two or three miles and the Wood Worsted Mill, the largest in the world, was inspected in detail by Sir William who was impressed by the magnitude of the undertaking and the remarkable efficiency everywhere in evidence.

Interrogated as to the wool manufacturing situation in the Commonwealth he said that the ruling Australia tariff which has been in force for approximately twelve months and which finds favor with both political parties was likely to remain a rather permanent legislation and had already stimulated the domestic industry. Australian manufacturers would be in a position to maintain their own market against English and continental exporters. Wool manufacturing in the Commonwealth at this time was confined almost entirely to the production of men's wear fabrics and the new tariff provided for an ad valorem duty ranging from 35 to 60%. On imported fabrics for women's wear the duty is very considerably less by reason of the fact that practically no dress goods are manufactured in Australia at this time.

On the possibility of the manufacture of synthetic wool in Australia Sir William did not seem to be unduly disturbed although the Commonwealth Government and Council for Scientific and Industrial Research has a proposal before it to devote time and money to utilize Australian timbers in the manufacture of artifical wool. As a manufacturer the relative inflammability of this material compared with cotton and wool was rather an important question. He thought that there might be larger use for artificial wool in fabrics intended for tropical countries. This synthetic material, having neither the physical or chemical properties of wool, could not become much of a disturbing factor in wool circles.

Discussing the remarkable clean-up of the Australian carryover last season and the steady absorption of the clip at firm prices Sir William said that it was quite evident that months ago the serious depression in wool manufacturing was fading away and that better times were coming. So far as Australian growers were concerned if prices being paid at this time could be maintained the growers as a whole would be quite satisfied. He looked for a steady slowly advancing upward tendency in wool the world over.

Wool and Substitute Quotations

(Corrected at close of business on Wednesday)

WOOL

Ohio, Pennsylvania and West Virginia

Fine delaine	.45—.46
Fine clothing	.40—.41
½ blood	.44—.45
⅝ blood	.43—.44
¼ blood	.43—.44

California
(Scoured Basis)

Northern, 12 mo.	1.03—1.08
Southern, 12 mo.	.85— .90

Texas
(Scoured Basis)

Fine 12 mo.	1.10—1.12
Fine 8 mo.	.90— .95

Pulled—Eastern
(Scoured Basis)

A.A.	1.10—1.12
A-Super	.93— .95
B-Super	.83— .85
C-Super	.65— .68

Montana, Idaho and Wyoming
(Scoured Basis)

Staple fine	1.12—1.15
Do. ½ bld.	1.00—1.05
Fine & fine medium	.98—1.00
¾ blood	.90— .92
½ blood	.80— .82

Mohair—Domestic

Best combing	.75—.80
Best carding	.65—.70

Mohair—Foreign (In Bond)

Turkey Fair av.	.40—43
Cape Firsts	.38—40

Foreign Clothing and Combing (In Bond)

Scoured Basis—Cape:	
Super 12 months	.95—1.00
Super 10-12 months	.88— .92
Australian:	
70s	1.05—1.12
64s	.95— .97
58—60s	.85— .87
Grease Basis:	
Montevideo:	
58—60s	42—44
56s	39—40
50s	36—37
Buenos Aires:	
4s, 40—44s	.28— 29
5s, 36—40s	.26— 27

Foreign Carpet (Grease Basis in Bond)

China: Combing	.27—29
Szechuen ass't	.25—27
Cordova	.22—24
Scotch Black Face	.24—26
East India: Kandahar	.35—38
Vlcan'r	.40—46
Joria	.39—45
Aleppo	.36—38
Iceland, class 1	.37—38
Iceland, class 2	.33—35

SUBSTITUTES

Wool Waste

Lap—	
Fine White	1.12—1.15
Fine colored	.88— .90
Thread White Worsted—	
Fine	.82— .85
½ blood	.75— .80
¾s blood	.65— .70
¼ blood	.48— .50
Thread Colored Worsted—	
Fine	.41— .43
½ blood	.35— .38
¾s blood	.33— .35
¼ blood	.30— .32
Card—	
Fine white	.50— .55
Medium white	.38— .42

Old Woolen Rags

Merinos—	
Coarse light	8 — 8½
Fine light	.18 —19
Fine dark	6 — 6½
Serges—	
Blue	8½— 9
Black	6½— 7
Red	.15 —16
Knit—	
White	.43 —45
Red	.14 —15
Light Hoods	.25 —26
Worsteds—	
Light	9 — 9½
Black	8½— 9
Blue	8½— 9

Mills Contest Advances

Wool Markets Continue to Move Against the Buyers

BOSTON.—There is an upward trend in wool values in Boston but the trend is held in check by timidity of wool holders afraid of another bad spell of poor business and partly for good business reasons based upon the belief that after the wide fluctuations in recent years on raw materials a sound and stable market would be the best for all interests concerned. The stream of tendency in wools is moving slowly against the buyer and carrying prices to a more favorable position. The position in foreign wools, held in bond, is remarkably strong. They cannot be replaced anywhere near cost and a sharp advance in these materials may occur any time particularly if

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They know that LEVER wound bobbins on their knitting machines mean clean yarn, even stitch, no seconds caused by the winding, even oiling and elimination of waste.

The LEVER rock maple bobbin is designed not only to conform to the traverse and differential speed motion of the machine, but also to give an absolutely even tension from top to bottom on the knitting machine.

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The LEVER patent non-lift spindle guarantees that no damage can be done to the yarn, by keeping the light free-turning builder cup always in the same relative position with the shoulder of the bobbin.

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334 Fourth Ave., New York

Wool—Continued

domestic wool supply, becoming smaller every day, should register any further advance. The goods market also seems to respond more freely to the situation in raw materials and in that center supplies of fabrics in demand have become so depleted that it is becoming increasingly a buyers' market with premiums paid upon fabrics that have taken the public fancy.

The strongest opposition to higher wool values comes from the topmakers and spinners, both these branches of manufacture being forced by strong wools and low fabrics into a situation where the manufacturing margins show little if any profit. Manufacturers are endeavoring wherever possible to cover new cloth orders on old wool prices. Summer Street wool merchants have no desire to check expanding mill business and yet do not feel that the slight advances they have been able to get, can be considered an impediment to successful manufacturing and merchandising of wool fabrics.

Extensive wool buying has stiffened the market and the whole situation is more encouraging. The weak spots have disappeared. Said a Summer Street factor "Manufacturers are beginning to chase dealers for wool and in this way indirectly lifting prices on raw materials for independent topmakers and spinners who have had a hard time of it for many months. The big manufacturers who carry the wool right along from the fleece to fabric are of course able to pay better prices than the average topmaker or spinner." As compared with a year ago the Boston wool market judged by its best territory wools is about 10% lower. The following table shows the situation:

	Sept., 1925	Sept., 1926	Per Cent Decline
Fine territory.....	$1.27	$1.13	12
½ blood territory.	1.13	1.02	10
⅜ blood territory.	1.00	.90	9
¼ blood territory.	.90	.80	11

A wool importer discussing the strong situation in foreign markets stated that so far as he could see the Boston wool trade had not profited to any marked degree by the higher values made immediately at openings in foreign markets. Too impatient to wait for better merchandising conditions they had weakened their own market by unwise concessions.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Sept. 25, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows, in lbs.:

RECEIPTS AT BOSTON

	Week Ended Sept. 25	1926	1925
Domestic	457,000	137,383,000	112,400,000
Foreign	660,000	150,490,000	129,438,000
Total	1,117,000	287,873,000	241,838,000

IMPORTS AT PRINCIPAL PORTS

Boston	660,000	150,490,000	129,438,000
Philadelphia ..	601,000	36,599,000	68,536,000
New York.....	813,000	45,937,000	51,570,000
Total	2,074,000	232,176,000	249,544,000

Is Carpet Wool at Top?

Strongest Group in Market—Demand from worsted Mills

PHILADELPHIA.—Strong demand for carpet wools is the outstanding feature on Chestnut Street. Carpet manufacturers have taken large lines during the last few weeks with top prices being paid this week, sales being reported as much as six cents above figures named on the same lots two months ago. East India wools advanced from 10% to 25% at the Liverpool sales, carpet whites and yellows, wasty, being 15% to 30% up as compared with previous sales held in July. Advances made at Liverpool averaged more than 20% on all wools sold in comparison with July prices.

There were 19,565 bales offered at the East India auctions and of these, 10,170 bales were taken by American buyers. This confirms the assertion of factors in the trade that American mills had allowed their stocks to reach abnormally low levels and during the last month have been bidding strongly to replenish. This situation was an important factor at Liverpool, where Americans took more wool than other countries combined. Marwar wools were advanced, for example, from 9 pence, paid in July, to 12 pence, more than 30% up.

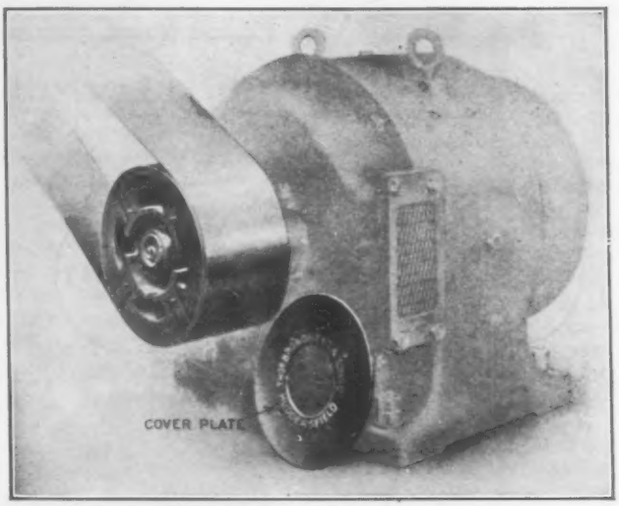
Has Top Been Reached

There has been a healthy movement of carpet wools this week to mills with prices averaging unchanged from a week ago. An interesting development was sale by several dealers of lots "to arrive," being first sales of this character reported, for almost a year. Notwithstanding continued strength in these wools several in the trade believe prices are now at, or rapidly approaching, the top.

There is no boom in territory or fleece wools but a healthy demand is noted in all grades. Attempts on the part of dealers to raise prices meet with strong resistance on the part of mills and prices, are stable although steady and firm. Bright quarter blood from Ohio has sold at 44c or 77c clean basis while other bright wools have moved at 43c. A number of dealers are holding this grade at 45c; delaines are quoted at 44c to 45c for Ohio; while quarter territory has sold at 80c clean.

Good demand for half blood has been reported, with territory sales being made at $1.00; three-eighths at 90c; French combing, fine, at $1.05 to $1.07 and fine staple at $1.10 and up. As compared with prices at the beginning of this year quarter blood fleece is 16c, clean basis, lower, having sold last January at 93c and this week similar wool brought 77c. Woolen wools are less active than last week although a fair demand is apparent. Pullers are holding B wools at 88c to 90c. Dealers have not paid these prices as yet. Sales of this grade to mills continue at 85c for average, best lots bringing up to 88c.

"THE BROADBENT"
AUTOMATIC CENTRIFUGAL CLUTCH



A Type No. 1 Centrifugal Clutch Belt Pulley assembled on Motor Spindle (with cover plate removed to show the interior shoes).

THOS. BROADBENT & SONS, LTD
Broadbent Hydro-Extractor
Broadbent Automatic Centrifugal Clutch.
JOHN GREENHALGH & SONS, LTD.
Cotton and Waste Cleaner, Wool Cleaner and Blender.
RICHARD THRELFALL
Self-Acting Mules (Cotton).
TOMLINSON'S (ROCHDALE), LTD.
Wiping Waste Machinery, Shredding Machine, Cotton Curtain Opening Machine.
W. & J. SAGAR, LTD.
"Cottenfield Brand" English Roller Leather.
JOHN HAIGH & SONS, LTD.
Carding Machines, Tape Condensers.

Sole Agents in U. S. A.

T. V. COTTER & SONS
179 LINCOLN STREET BOSTON, MASS.
Southern Representative: John Hill, Healey Bldg., Atlanta, Ga.

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Hand-Belt-Electric-Hydraulic
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From year to year, hundreds of new names are added to the list of LOGEMANN baling-press users in the textile field.

Every year, repeat orders from users of LOGEMANN baling-presses increase steadily, denoting the satisfaction derived from this equipment.

But—

Until every mill-owner, superintendent, and operator, is familiar with the LOGEMANN line of balers for yarn, waste and finished goods, our advertising has not accomplished its purpose.

We solicit your inquiries.

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See also CONSOLIDATED TEXTILE CATALOG
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Reasons Why VICTROLYN

is used by the largest cotton mills in the country as a *Sizing Assistant* for Cotton Warps.

BOSSON AND LANE, *Sole Manufacturers*

ATLANTIC, MASS.

See also CONSOLIDATED TEXTILE CATALOG

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Aqua Ammonia	Formic Acid

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AMERICAN CYANAMID COMPANY
INCORPORATED

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WYANDOTTE TEXTILE ALKALIES

has a superior lustre and a smoothness never equalled.

Ask your supply man or write our technical expert.

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S. R. DAVID & COMPANY
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Dyestuffs

252 Congress Street Boston, Mass.

Sole New England Agents for LACTAMINE and VIOLAMINE.
New England Agents for the FADE-OMETER,
Manufactured by Atlas Electric Devices Co.

Einstein has quite possibly upset the accepted theories of matter but the conscientious expert service back of WARREN SOAP is more firmly established than ever.

Warren Soap Manufacturing Company
77 Summer Street, Boston, Mass.
Established 1870 Incorporated 1890

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Extremely fast and level dyeing
Dyes well by Franklin Machine Process.

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Everything for Textile Printers
And for Bleachers, Dyers and Finishers
Engraving Machinery and Supplies
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Branch Office: 15 Pine Street, Providence, R. I.

DYESTUFFS AND CHEMICALS

Anco Finishing Co. Operating at Capacity

The Anco Finishing Co. at Wilkinsonville, Mass., which has been reorganized during the last several weeks by W. H. Clapham, vice-president of the firm, is now operating at full capacity.

Through cooperation with the New Haven railroad the company now has overnight delivery service to New York and this situation, Mr. Clapham declares, has aided the plant materially in its efforts to obtain new orders and customers. Broadcloths, sheetings, voiles, marquisettes, pongees and warp sateens are the fabrics upon which the company is now specializing.

The plant has been thoroughly overhauled, some new machinery installed and all necessary arrangements made for the finishing of a wide variety of fine goods which the company expects to handle in the near future.

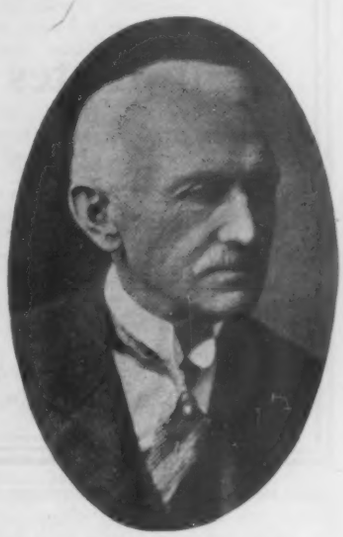
The present rate of production is 500,000 yds. weekly and this total will be increased to 750,000 before the end of next month.

Thomas MacCluggage, the superintendent, resigned recently and the management of the plant is temporarily in the hands of Mr. Clapham. The successor to Mr. MacCluggage will be appointed soon. Mr. Clapham was formerly secretary of the Bradford Dyeing Association (U. S. A.) plant in Westerly, R. I.

Deans of Dyestuff Industry to Retire

BOSTON.

ONE of the most notable gatherings of dyestuff men for years was the dinner given to Charles L. Gagnebin and Herbert W. Reed by their friends in the dyestuff trade at the Algonquin Club, Monday evening, Sept. 27. These two men, considered the deans of the trade in Boston, were guests at a testimonial banquet. More than 100 well known men were present and the several branches of the industry furnished the after dinner speakers. Arthur L. Norton Boston manager of the National Aniline & Chemical Co., was chairman of the occasion while the toastmaster was Alan A. Claflin, New England representative of the L. B. Fortner Co. The chief speaker of the evening was Col. H. A. Metz former comptroller of New York City and a well known figure in the dye industry. Other speakers were Ernest K. Halback vice-president of the General Dyestuffs Corp., Robert A. Kellar of the Gregg Extract Co.; S. W. Wilder of the Merrimac Chemical Co. and Howard Neilman representing the dyestuffs trade papers. Among the guests were Edward A. McKinnon manager of the Du Pont dyestuffs division, Dr. F. P. Summers of the Noil Color & Chemical Co. and Dr. E. H. Killhefer of the Newport Chemical Works, Inc.



Herbert W. Reed

Charles L. Gagnebin

Herbert Warren Reed for more than two score years has been connected with the distribution of dyestuffs. Born in Belmont, Massachusetts, he entered the Boston office of Wm. Pickhardt & Kuttroff in September, 1883, this firm being at that time, as they and their successors have been even since, the American representatives of the great German dyestuff and chemical concern, the Badische Anilin & Soda Fabrik. Conscientious, courteous, a faithful factor and earnest emissary, his unswerving honesty and lasting loyalty have gained for him the friendship of his customers and esteem of his competitors.

Charles Louis Gagnebin for forty-four years has been connected with the dyestuff industry. Born in New York City, he entered the dyestuff business in 1882, with the St. Denis

Miscellaneous Chemicals

Alumina Sulp. com....	1 40	—	1 45
Iron Free	2 00	—	2 05
Alum. Ammonia Lmp..	3⅜	—	3½
Potash, Lump	2¾	—	3½
Ammoniac, Sal. white gr., dom.	5½	—	7
Bleach powder, per 100 lb. works, carloads..	2 00	—	2 40
Blue Stone	5	—	...
Calcium Arsenate	7½		9½
Chlorine, Liq. Cylinders	5½	—	9
Tanks	4	—	4¼
Copperas, ton	12 00	—	18 00
Cream of Tartar.....	21	—	21½
Epsom Salts, 100 lb...	1 30	—	2 00
Formaldehyde Spot ...	9	—	9½
Glauber Salts, 100 lb...	80	—	1 20
Glycerine (C. P.) bbls.	30	—	32
Cans	31½	—	33½
Yellow Crude	30	—	32
Hydrosulphite Conc....	23	—	25
Lead—Brown acetate..	13	—	13½
White (crystals)	14	—	14½
Lime, acetate, 100 lb...	3 25	—	...
Potassium—Bichromate	8¼	—	8½
Chlorate crystals ...	8½	—	9
Permangan, tech.....	14½	—	15
Sodium acetate	4½	—	5
Bichromate	6½	—	6¾
Bisulphite, 35%.....	1 50	—	1 75
Nitrite	9	—	9¼
Phosphate	3¼	—	3½
Prussiate, yellow.....	10	—	10¼
Sulphite, 60% fused.	3¾	—	4
30% crystals	2½	—	...
Tartar emetic, tech....	29	—	31½
Tin—Crystals	41½	—	42
Bichloride, 50 deg....	17	—	17¼
Oxide, bbls.	64	—	66
Zinc Dust	9½	—	10

Acids

Acetic, 28% per 100 lb.	3 25	—	3 50
Citric crystals	45	—	...
Formic, 90%.....	10½	—	11
Lactic, 22%.....	5½	—	7
Muriatic, 18 deg. per 100 lb. in tank cars.	85	—	95
Nitric, 36@42 deg. per 100 lb.....	5 00	—	6 75
Oxalic	10¾	—	11½
Sulphuric, 66 deg. per ton in tank cars.....	15 00	—	16 00
Tartaric	20	—	20½

Alkalies

Ammonia, aqua. 26 deg.	3½	—	4
Borax, Cryn. bbls.....	5¼	—	...
Potash, carbonate, 80–85%	6	—	6¼
Caustic, 88–92%.....	7⅛	—	7⅝
Soda Ash, 58% light...	1 43	—	2 44
Contract, 100 lb.....	1 25	—	1 63
Bicarb, per 100 lbs...	1 90	—	2 25
Caustic, 76% per 100 lb.	3 20	—	3 90
Contract, 100 lb.....	3 10	—	...
Sal. 100 lb.....	1 10	—	1 25

Natural Dyes and Tannins

Fustic: Crystals.....	20	—	22
Liquid, 51 deg.....	10	—	12
Gambier, liquid	12½	—	...
Hematine, crystals	14	—	20
Hypernic Ext.—51 deg.	12	—	16
Indigo—Madras	1 30	—	...
Logwood Extract. liq. 51 deg.....	8	—	10
Crystals	16	—	20
Osage Orange, Extract, 51 deg.	7	—	7¼
Quercitron extract, 51 deg.	6	—	7
Sumac. Ext. dom., ref., 51 deg.....	6½	—	7
Extract, stainless ...	10	—	...
Tannic Acid, tech.....	35	—	40

Dyestuffs and Intermediaries

Alpha Naphthol, ref....	90	—	95
Crude	60	—	65
Alpha Naphthylamine..	35	—	37
Aniline Oil	15	—	17
Salt	22	—	24
Beta Naphthol, sublimed	55	—	60
Technical	22	—	24
Dimethylaniline	30	—	32
Metaphenylene Diamine	90	—	95
Paranitraniline	48	—	50

Oils and Soaps

Castor Oil, No. 3.....	12	—	13
Olive Oil, denatured, gal.	1 20	—	...
Foots	8½	—	9
Red Oil, lb.....	9	—	10½
Stearic Acid, double presses	13	—	13½
Turkey Red Oil, 50%..	10	—	12

Adhesive and Sizing Materials

Albumen, blood domestic	50	—	55
Dextrine-Potato	7½	—	8
Corn, bags, 100 lb....	4 07	—	4 12
Do. bbls, 100 lb.....	4 34	—	4 39
Gum, British, 100 lb...	4 37	—	...
Do. bbls.....	4 64	—	...
Sago flour.....	3½	—	4
Starch, corn, 100 lb....	3 32	—	3 42
Do. bbls.....	3 59	—	3 69
Do. thin boiling, bags, 100 lb.....	3 92	—	4 02
Do. bbls.....	4 19	—	4 29
Potato	6½	—	...
Rice	9	—	9½
Wheat	6½	—	7
Tapioca flour	3½	—	5½

Coal Tar Dyes

Direct Colors—			
Black (H-acid).....	28	—	35
Black Columbia FF..	50	—	60
Blue, 2 B.....	24	—	32
Blue, sky ordinary...	60	—	80
Blue, 2 GL.....	2 00	—	2 50
Blue, 4 GL.....	2 25	—	...
Blue Sky, FF.....	95	—	1 50
Blue, Fast, RL.....	1 90	—	...
Blue, Solamine.....	2 00	—	...
Benzo Azurine.....	75	—	80
Brown, C.....	40	—	60
Brown, M.....	70	—	90
Brown, Congo G.....	85	—	...
Brown, Congo R.....	80	—	...
Green, B.....	60	—	90
Green G.....	65	—	90
Orange, Congo.....	60	—	...
Orange, Fast S.....	1 70	—	...
Red, Fast F.....	80	—	90
Red, Congo.....	40	—	50
Benzo Purpurine, 4 B.	40	—	60
Benzo Purpurine 10 B.....	1 25	—	1 50
Scarlet, 4 BA.....	1 50	—	...
Scarlet, 4 BS	2 10	—	...
Scarlet, 8 BS	2 15	—	...
Scarlet, Diamine B..	1 65	—	...
Violet N.....	1 10	—	1 20
Yellow chrysophenine	60	—	1 30
Yellow, Stilibene.....	90	—	95
Developing Colors—			
Black, BH.....	40	—	60
Black Zambesi.....	....	—	90
Bordeaux, Dev.....	2 50	—	...
Orange, developed....	2 50	—	...
Primuline	1 00	—	1 15
Red, Dev. 7 BL.....	2 50	—	...
Scarlet, Dev.....	2 50	—	...
Sulphur Colors—			
Black	14	—	24
Blue, cadet.....	90	—	95
Blue, navy.....	50	—	60
Brown	20	—	60
Green	55	—	1 50
Green, olive.....	25	—	50
Yellow	45	—	50
Basic Colors—			
Auramine	90	—	1 00
Bismark Brown.....	50	—	60
Chrysoidine	40	—	65
Fuschine crystals.....	1 50	—	1 75
Malachite green.....	1 50	—	...
Methylene blue.....	1 10	—	1 25
Methyl violet.....	80	—	1 15
Rhodamine B, extcone	5 50	—	6 00
Safranine	1 45	—	1 60
Victoria Blue B.....	3 10	—	...
Acid Colors—			
Naphthol blue blk....	35	—	60
Naphth lamine black 4 B.....	50	—	55
Alizarine saphirol....	2 75	—	4 00
Alkali blue.....	3 25	—	3 50
Indigotine	75	—	1 30
Induline (water solu- able)	75	—	80
Soluble Blue.....	3 00	—	3 75
Sulphocyanine	70	—	90
Sulphone Blue R.....	60	—	95
Patent Blue A.....	2 85	—	...
Rescorcin brown.....	80	—	90
Guinea green.....	1 00	—	2 20
Wool green S.....	70	—	1 70
Orange II.....	24	—	30
Orange GG crys.....	60	—	...
Acid Fuchsine	80	—	90
Azo eosine G.....	65	—	82
Crocein scarlet.....	1 15	—	1 30
Fast red A.....	50	—	65
Azo yellow.....	1 35	—	1 40
F. Light Yellow 2 G.	2 00	—	...
F. Light Yellow 3 G.	1 90	—	2 50
Naphthol, yellow....	1 35	—	1 40
Chrome Colors—			
Aliz. Black B.....	2 00	—	...
Diamond Black PV...	70	—	...
Chrome Blue Black..	40	—	50
Chrome Brown.....	60	—	1 25
Chrome Green.....	75	—	1 50
Chrome Yellow.....	45	—	1 10
Indigo—			
Synthetic 20% paste.	14	—	14¼

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FOR ANY MACHINE

66 Maple Street

ORANGE, MASS. U.S.A.

Your Choice of any

DYE JIG ROLL

Wood
Metal
Rubber
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RODNEY HUNT MACHINE CO., ORANGE, MASS.

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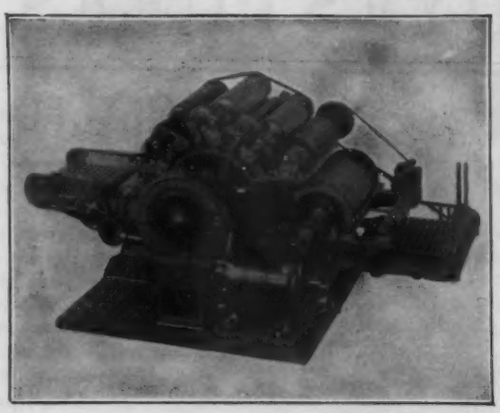

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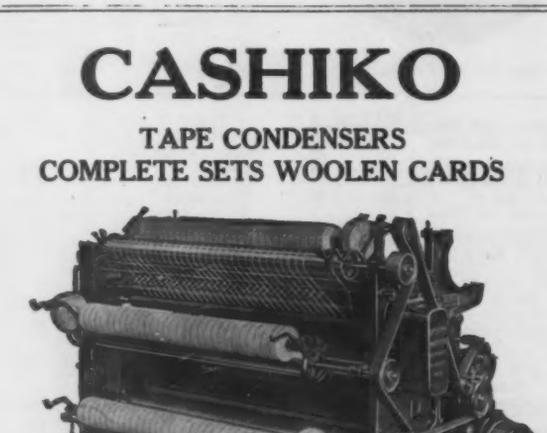
COMPLETE SETS WOOLEN CARDS



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Applied to All Makes of Woolen Cards

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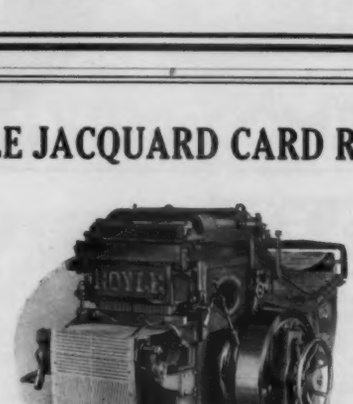

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It faithfully reproduces any set of jacquard cards, automatically, rapidly, cheaply.

Write for catalog No. 315.

JOHN ROYLE & SONS

PATERSON, N. J.

Dyestuffs and Chemicals—Continued

Dyestuff & Chemical Co., and continued with them and their successors in New York and Philadelphia until 1888. In that year he came to Boston as the representative of Schulze-Berge & Koechl, with whom, and their successors, Schulze-Berge Koechl & Mouvius, Victor Koechl & Company, H. A. Metz & Co., Farbwerke Hoechst Co. and the General Dyestuffs Co., he has since been associated. Affable, alert, an energetic executive and considerate counsellor, this long period of diligence in the dyestuff trade endeared him alike to customers and competitors.

The date set by these men for their retirement from active business is around the first of October but while relieved from active participation in the affairs of the corporation they will no doubt be found from time to time in their old quarters although Mr. Gagnebin plans a world tour in the near future. Beautiful wrist watches were presented to these gentlemen as a parting gift from their associates in the dyestuff industry.

Southern Chemists to Hold Annual Meeting

The annual meeting of the Southern Section of the American Association of Textile Chemists and Colorists will be held at the Cleveland Hotel, Spartanburg, S. C., Saturday evening, Oct. 16.

J. M. Hatch, secretary of the Belmont (N. C.) Processing Co., will address the meeting on "Developments in Mercerization." Mr. Hatch is connected with the South's newest mercerizing plant, and will have a message of especial interest for the weaver and knitter.

J. E. Dean, superintendent of the finishing plant of the Pacific Mills, Lyman, S. C. will present a paper on "Discharge Printing," a subject of interest to textile chemists, which Mr. Dean is especially qualified to handle on account of his long experience in this class of work.

John A. Law, of Spartanburg, S. C., a leader in the textile industry in the South, will explain the purpose of The Cotton-Textile Institute, which is arousing much discussion and high hopes in the industry.

Appointment to New York District Office

Richard J. Flood, Jr., who has been associated with the Chemical Division of the Bureau of Foreign and Domestic Commerce, in Washington, for the last 12 months, has been transferred to the New York District Office, 734 Custom house, to devote his entire time to attending to the wants of chemical interests located within the New York district. The Department endeavors to facilitate the distribution of information and the answering of inquiries and it is felt that the allocation of Mr. Flood, specially detailed to handle chemical matters, will be a real step forward in this direction.

Business News

Incorporated to Manufacture Duck Composition Belt

The Ton-Tex Corp., with main sales offices and stock rooms at 345-351 West 35th St., New York, and with factory office at Grand Rapids, Mich., has been incorporated under the laws of the State of Michigan, with a paid-in capital stock of $50,000, to manufacture a thin duck composition belt for both transmission and conveying purposes. The product is now on the market and will be sold both direct to the consumer and through stock-carrying distributors throughout the United States.

The personnel includes George S. Baker, vice-president and general manager, who has been identified with the belting industry since 1907. His past connections include publicity manager of the New York Leather Belting Co.; associate organizer of the Olmsted-Flint Co.; eastern manager of sales for the F. Raniville Co.; and general sales manager of the Fabreeka Belting Co. He severed his connection with the latter company in July of this year and has since devoted his time to the organization of the new Ton-Tex Corp.

New Branch Office of Link-Belt Co.

A new branch office has just been opened in Utica, N. Y., at 107 Foster Building, 131 Genesee St., by Link-Belt Co. of Chicago, Philadelphia and Indianapolis.

This, their 34th office, and the third within the State of New York, is to be devoted especially to the sale of Link-Belt silent chain and Link-Belt roller chain; and will be in charge of F. P. Hermann, Jr., who has had many years of silent chain experience and contact while located in the New York Office of that company.

Represents Turner in Chicago

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Power of Penetration

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L. SONNEBORN SONS, Inc.

Manufacturing Chemists for the Textile Industry

114 Fifth Avenue New York

Sales Offices and Warehouses in all Principal Textile Centers

Amalie SONOLENE

L. SONNEBORN SONS INC., NEW YORK, N.Y.

All Around—

Reasons Why VICTROLYN

is used by the largest cotton mills in the country as a *Sizing Assistant* for Cotton Warps.

BOSSON AND LANE, *Sole Manufacturers*

ATLANTIC, MASS.

See also CONSOLIDATED TEXTILE CATALOG

Chemicals from The Air

AMERICAN CYANAMID AERO BRAND PRODUCTS

As pioneer producers of air nitrates, we have developed processes for the commercial production of many chemicals from air-nitrogen bases, insuring standards of purity which were considered impossible in the processes formerly employed.

Among these industrial chemicals the following are of special interest to the Textile Industry:

Yellow Prussiate of Soda
Yellow Prussiate of Potash
Aqua Ammonia
Thiourea
Dicyandiamid
Formic Acid
Sulphocyanides

AMERICAN CYANAMID COMPANY
INCORPORATED
511 Fifth Avenue New York City

Ask your supply man or write our technical expert.

Rayon silk treated with the

WYANDOTTE TEXTILE ALKALIES

has a superior lustre and a smoothness never equalled.

The J. B. FORD Co., *Sole Manufacturers*, Wyandotte, Michigan

S. R. DAVID & COMPANY
INCORPORATED

Dyestuffs

252 Congress Street Boston, Mass.

Sole New England Agents for LACTAMINE and VIOLAMINE.
New England Agents for the FADE-OMETER,
Manufactured by Atlas Electric Devices Co.

Einstein has quite possibly upset the accepted theories of matter but the conscientious expert service back of WARREN SOAP is more firmly established than ever.

Warren Soap Manufacturing Company
77 Summer Street, Boston, Mass.
Established 1870 Incorporated 1890

ANTHRACENE BLUE

W.R. and W.G. Pre-war Types
Extremely fast and level dyeing
Dyes well by Franklin Machine Process.

E. J. FEELEY, Inc., *Sole Agents*
Manufacturers - Agents - Importers
DYESTUFFS and CHEMICALS
128-130 Oliver St., Boston, Mass.

Everything for Textile Printers
And for Bleachers, Dyers and Finishers
Engraving Machinery and Supplies
Chas. A. Johnson & Co., 25 Walker Street, New York City
Branch Office: 15 Pine Street, Providence, R. I.

DYESTUFFS AND CHEMICALS

Anco Finishing Co. Operating at Capacity

The Anco Finishing Co. at Wilkinsonville, Mass., which has been reorganized during the last several weeks by W. H. Clapham, vice-president of the firm, is now operating at full capacity.

Through cooperation with the New Haven railroad the company now has overnight delivery service to New York and this situation, Mr. Clapham declares, has aided the plant materially in its efforts to obtain new orders and customers. Broadcloths, sheetings, voiles, marquisettes, pongees and warp sateens are the fabrics upon which the company is now specializing.

The plant has been thoroughly overhauled, some new machinery installed and all necessary arrangements made for the finishing of a wide variety of fine goods which the company expects to handle in the near future.

The present rate of production is 500,000 yds. weekly and this total will be increased to 750,000 before the end of next month.

Thomas MacCluggage, the superintendent, resigned recently and the management of the plant is temporarily in the hands of Mr. Clapham. The successor to Mr. MacCluggage will be appointed soon. Mr. Clapham was formerly secretary of the Bradford Dyeing Association (U. S. A.) plant in Westerly, R. I.

Deans of Dyestuff Industry to Retire

BOSTON.

ONE of the most notable gatherings of dyestuff men for years was the dinner given to Charles L. Gagnebin and Herbert W. Reed by their friends in the dyestuff trade at the Algonquin Club, Monday evening, Sept. 27. These two men, considered the deans of the trade in Boston, were guests at a testimonial banquet. More than 100 well known men were present and the several branches of the industry furnished the after dinner speakers. Arthur L. Norton Boston manager of the National Aniline & Chemical Co., was chairman of the occasion while the toastmaster was Alan A. Claflin, New England representative of the L. B. Fortner Co. The chief speaker of the evening was Col. H. A. Metz former comptroller of New York City and a well known figure in the dye industry. Other speakers were Ernest K. Halback vice-president of the General Dyestuffs Corp., Robert A. Kellar of the Gregg Extract Co.; S. W. Wilder of the Merrimac Chemical Co. and Howard Neilman representing the dyestuffs trade papers. Among the guests were Edward A. McKinnon manager of the Du Pont dyestuffs division, Dr. F. P. Summers of the Noil Color & Chemical Co. and Dr. E. H. Killhefer of the Newport Chemical Works, Inc.

Herbert W. Reed

Charles L. Gagnebin

Herbert Warren Reed for more than two score years has been connected with the distribution of dyestuffs. Born in Belmont, Massachusetts, he entered the Boston office of Wm. Pickhardt & Kuttroff in September, 1883, this firm being at that time, as they and their successors have been even since, the American representatives of the great German dyestuff and chemical concern, the Badische Anilin & Soda Fabrik. Conscientious, courteous, a faithful factor and earnest emissary, his unswerving honesty and lasting loyalty have gained for him the friendship of his customers and esteem of his competitors.

Charles Louis Gagnebin for forty-four years has been connected with the dyestuff industry. Born in New York City, he entered the dyestuff business in 1882, with the St. Denis

Miscellaneous Chemicals

Alumina Sulp. com....	1 40	— 1 45
Iron Free	2 00	— 2 05
Alum. Ammonia Lmp..	3⅜	— 3½
Potash, Lump	2¾	— 3½
Ammoniac, Sal. white gr., dom.	5½	— 7
Bleach powder, per 100 lb. works, carloads..	2 00	— 2 40
Blue Stone	5	— ...
Calcium Arsenate	7½	— 9½
Chlorine, Liq. Cylinders	5½	— 9
Tanks	4	— 4¼
Copperas, ton	12 00	—18 00
Cream of Tartar.....	21	— 21½
Epsom Salts, 100 lb...	1 30	— 2 00
Formaldehyde Spot ...	9	— 9½
Glauber Salts, 100 lb...	80	— 1 20
Glycerine (C. P.) bbls.	30	— 32
Cans	31½	— 33½
Yellow Crude	30	— 32
Hydrosulphite Conc....	23	— 25
Lead—Brown acetate..	13	— 13½
White (crystals)	14	— 14½
Lime, acetate, 100 lb...	3 25	— ...
Potassium—Bichromate	8¼	— 8½
Chlorate crystals ...	8½	— 9
Permangan, tech.....	14½	— 15
Sodium acetate	4½	— 5
Bichromate	6½	— 6¾
Bisulphite, 35%.....	1 50	— 1 75
Nitrite	9	— 9¼
Phosphate	3¼	— 3½
Prussiate, yellow.....	10	— 10¼
Sulphite, 60% fused.	3¾	— 4
30% crystals	2½	— ...
Tartar emetic, tech....	29	— 31½
Tin—Crystals	41½	— 42
Bichloride, 50 deg....	17	— 17¼
Oxide, bbls.	64	— 66
Zinc Dust	9½	— 10

Acids

Acetic, 28% per 100 lb.	3 25	— 3 50
Citric crystals	45	— ...
Formic, 90%	10½	— 11
Lactic, 22%	5½	— 7
Muriatic, 18 deg. per 100 lb. in tank cars.	85	— 95
Nitric, 36@42 deg. per 100 lb.....	5 00	— 6 75
Oxalic	10¾	— 11½
Sulphuric, 66 deg. per ton in tank cars.....	15 00	—16 00
Tartaric	29	— 29½

Alkalies

Ammonia, aqua, 26 deg.	3½	— 4
Borax, Crys. bbls.....	5¼	— ...
Potash, carbonate, 80–85%	6	— 6¼
Caustic, 88–92%.....	7⅛	— 7⅝
Soda Ash, 58% light...	1 43	— 2 44
Contract, 100 lb.....	1 25	— 1 63
Bicarb, per 100 lbs...	1 90	— 2 25
Caustic, 76% per 100 lb.	3 20	— 3 90
Contract, 100 lb.....	3 10	— ...
Sal. 100 lb.....	1 10	— 1 25

Natural Dyes and Tannins

Fustic: Crystals.....	20	— 22
Liquid, 51 deg.....	10	— 12
Gambier, liquid	12½	— ...
Hematine, crystals	14	— 20
Hypernic Ext.—51 deg.	12	— 16
Indigo—Madras	1 30	— ...
Logwood Extract, liq. 51 deg.....	8	— 10
Crystals	16	— 20
Osage Orange, Extract, 51 deg.	7	— 7¼
Quercitron extract, 51 deg.	6	— 7
Sumac. Ext. dom., ref..	6½	— 7
Extract, stainless ...	10	— ...
Tannic Acid, tech.....	35	— 40

Dyestuffs and Intermediaries

Alpha Naphthol, ref....	90	— 95
Crude	60	— 65
Alpha Naphthylamine..	35	— 37
Aniline Oil	15	— 17
Salt	22	— 24
Beta Naphthol, sublimed	55	— 60
Technical	22	— 24
Dimethylaniline	30	— 32
Metaphenylene Diamine	90	— 95
Paranitraniline	48	— 50

Oils and Soaps

Castor Oil, No. 3.....	12	— 13
Olive Oil, denatured, gal.	1 20	— ...
Foots	8½	— 9
Red Oil, 1b.....	9	— 10½
Stearic Acid, double presses	13	— 13½
Turkey Red Oil, 50%..	10	— 12

Adhesive and Sizing Materials

Albumen, blood domestic	50	— 55
Dextrine-Potato	7½	— 8
Corn, bags, 100 lb....	4 07	— 4 12
Do. bbls, 100 lb.....	4 34	— 4 39
Gum, British, 100 lb...	4 37	— ...
Do. bbls.....	4 64	— ...
Sago flour.....	3½	— 4
Starch, corn, 100 lb....	3 32	— 3 42
Do. bbls.....	3 59	— 3 69
Do. thin boiling, bags, 100 lb.....	3 92	— 4 02
Do. bbls.....	4 19	— 4 29
Potato	6½	— ...
Rice	9	— 9½
Wheat	6½	— 7
Tapioca flour	3½	— 5½

Coal Tar Dyes

Direct Colors—		
Black (H-acid).....	28	— 35
Black Columbia FF..	50	— 60
Blue, 2 B.....	24	— 32
Blue, sky ordinary...	60	— 80
Blue, 2 GL.....	2 00	— 2 50
Blue, 4 GL.....	2 25	— ...
Blue Sky, FF.....	95	— 1 50
Blue, Fast, RL.....	1 90	— ...
Blue, Solamine.....	2 00	— ...
Benzo Azurine.....	75	— 80
Brown, C.....	40	— 60
Brown, M.....	70	— 90
Brown, Congo G.....	85	— ...
Brown, Congo R.....	80	— ...
Green, B.....	60	— 90
Green G.....	65	— 90
Orange, Congo.....	60	— ...
Orange, Fast S.....	1 70	— ...
Red, Fast F.....	80	— 90
Red, Congo.....	40	— 50
Benzo Purpurine, 4 B.	40	— 60
Benzo Purpurine 10 B.....	1 25	— 1 50
Scarlet, 4 BA.....	1 50	— ...
Scarlet, 4 BS	2 10	— ...
Scarlet, 8 BS	2 15	— ...
Scarlet, Diamine B..	1 65	— ...
Violet N.....	1 10	— 1 20
Yellow chrysophenine	60	— 1 30
Yellow, Stillbene.....	90	— 95
Developing Colors—		
Black, BH.....	40	— 60
Black Zambesi.....	...	— 90
Bordeaux, Dev.....	2 50	— ...
Orange, developed....	2 50	— ...
Primuline	1 00	— 1 15
Red, Dev. 7 BL.....	2 50	— ...
Scarlet, Dev.....	2 50	— ...
Sulphur Colors—		
Black	14	— 24
Blue, cadet.....	90	— 95
Blue, navy.....	50	— 60
Brown	20	— 60
Green	55	— 1 50
Green, olive.....	25	— 50
Yellow	45	— 50
Basic Colors—		
Auramine	90	— 1 00
Bismark Brown.....	50	— 60
Chrysoidine	40	— 65
Fuschine crystals....	1 50	— 1 75
Malachite green.....	1 50	— ...
Methylene blue.....	1 10	— 1 25
Methyl violet.....	80	— 1 15
Rhodamine B, extcone	5 50	— 6 00
Safranine	1 45	— 1 60
Victoria Blue B.....	3 10	— ...
Acid Colors—		
Naphthol blue blk....	35	— 60
Naphth lamine black 4 B.....	50	— 55
Alizarine saphirol....	2 75	— 4 00
Alkali blue.....	3 25	— 3 50
Indigotine	75	— 1 30
Induline (water soluable)	75	— 80
Soluble Blue.....	3 00	— 3 75
Sulphoneyanine	70	— 90
Sulphone Blue R.....	60	— 95
Patent Blue A.....	2 85	— ...
Rescorcin brown.....	80	— 90
Guinea green.....	1 00	— 2 20
Wool green S.....	70	— 1 70
Orange II.....	24	— 30
Orange GG crys.....	60	— ...
Acid Fuchsine	80	— 90
Azo eosine G.....	65	— 82
Crocein scarlet.....	1 10	— 1 30
Fast red A.....	50	— 65
Azo yellow.....	1 35	— 1 40
F. Light Yellow 2 G.	2 00	— ...
F. Light Yellow 3 G.	1 00	— 2 50
Naphthol, yellow....	1 35	— 1 40
Chrome Colors—		
Aliz. Black B.....	2 00	— ...
Diamond Black PV...	70	— ...
Chrome Blue Black..	40	— 50
Chrome Brown.....	60	— 1 25
Chrome Green.....	75	— 1 50
Chrome Yellow.....	45	— 1 10
Indigo—		
Synthetic 20% paste.	14	— 14½

RODNEY HUNT

ROLLS WOOD METAL RUBBER

FOR ANY MACHINE

66 Maple Street

ORANGE, MASS. U.S.A.

Your Choice of any

DYE JIG ROLL

Wood
Metal
Rubber
Earthenware

Write for information

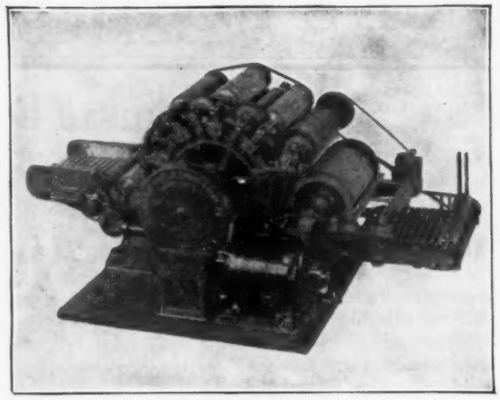
Roll Dept.

RODNEY HUNT MACHINE CO., ORANGE, MASS.

U. S. A.

See also CONSOLIDATED TEXTILE CATALOG

RODNEY HUNT



Eliminates Guess-Work

It is risky to guess about raw materials. Many a concern has lost thousands of dollars because somebody's "guess" went wrong.

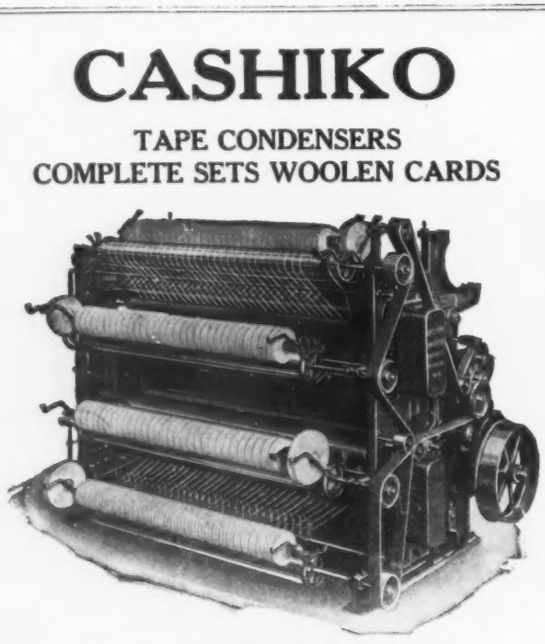
The Sample Carder shown above eliminates guess work by supplying dependable sample cardings. This card works at a small operating expense—¾ H. P. motor keeps it running. Write for further information.

H. C. GREENFIELD ENGINEERING CO.

28-34 Davis St., Dept. T. HARRISON, N. J.

CASHIKO

TAPE CONDENSERS
COMPLETE SETS WOOLEN CARDS



Cashiko Tape Condenser

Increases Production, Improves Quality
Applied to All Makes of Woolen Cards

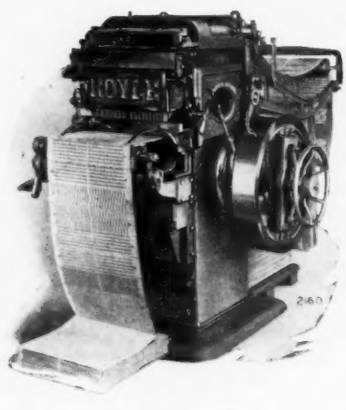
Details Supplied Upon Request

CASHIKO MACHINE COMPANY

Office and Works

Winona St., off Shrewsbury St. See also CONSOLIDATED TEXTILE CATALOG Worcester, Mass.

THE ROYLE JACQUARD CARD REPEATER



A machine that every user endorses because it saves a tremendous amount of work and considerable sums of money.

It faithfully reproduces any set of jacquard cards, automatically, rapidly, cheaply.

Write for catalog No. 315.

JOHN ROYLE & SONS

PATERSON N.J.

Dyestuffs and Chemicals—Continued

Dyestuff & Chemical Co., and continued with them and their successors in New York and Philadelphia until 1888. In that year he came to Boston as the representative of Schulze-Berge & Koechl, with whom, and their successors, Schulze-Berge Koechl & Mouvius, Victor Koechl & Company, H. A. Metz & Co., Farbwerke Hoechst Co. and the General Dyestuffs Co., he has since been associated. Affable, alert, an energetic executive and considerate counsellor, this long period of diligence in the dyestuff trade endeared him alike to customers and competitors.

The date set by these men for their retirement from active business is around the first of October but while relieved from active participation in the affairs of the corporation they will no doubt be found from time to time in their old quarters although Mr. Gagnebin plans a world tour in the near future. Beautiful wrist watches were presented to these gentlemen as a parting gift from their associates in the dyestuff industry.

Southern Chemists to Hold Annual Meeting

The annual meeting of the Southern Section of the American Association of Textile Chemists and Colorists will be held at the Cleveland Hotel, Spartanburg, S. C., Saturday evening, Oct. 16.

J. M. Hatch, secretary of the Belmont (N. C.) Processing Co., will address the meeting on "Developments in Mercerization." Mr. Hatch is connected with the South's newest mercerizing plant, and will have a message of especial interest for the weaver and knitter.

J. E. Dean, superintendent of the finishing plant of the Pacific Mills, Lyman, S. C. will present a paper on "Discharge Printing," a subject of interest to textile chemists, which Mr. Dean is especially qualified to handle on account of his long experience in this class of work.

John A. Law, of Spartanburg, S. C., a leader in the textile industry in the South, will explain the purpose of The Cotton-Textile Institute, which is arousing much discussion and high hopes in the industry.

Appointment to New York District Office

Richard J. Flood, Jr., who has been associated with the Chemical Division of the Bureau of Foreign and Domestic Commerce, in Washington, for the last 12 months, has been transferred to the New York District Office, 734 Custom house, to devote his entire time to attending to the wants of chemical interests located within the New York district. The Department endeavors to facilitate the distribution of information and the answering of inquiries and it is felt that the allocation of Mr. Flood, specially detailed to handle chemical matters, will be a real step forward in this direction.

Business News

Incorporated to Manufacture Duck Composition Belt

The Ton-Tex Corp., with main sales offices and stock rooms at 345-351 West 35th St., New York, and with factory office at Grand Rapids, Mich., has been incorporated under the laws of the State of Michigan, with a paid-in capital stock of $50,000, to manufacture a thin duck composition belt for both transmission and conveying purposes. The product is now on the market and will be sold both direct to the consumer and through stock-carrying distributors throughout the United States.

The personnel includes George S. Baker, vice-president and general manager, who has been identified with the belting industry since 1907. His past connections include publicity manager of the New York Leather Belting Co.; associate organizer of the Olmsted-Flint Co.; eastern manager of sales for the F. Raniville Co.; and general sales manager of the Fabreeka Belting Co. He severed his connection with the latter company in July of this year and has since devoted his time to the organization of the new Ton-Tex Corp.

New Branch Office of Link-Belt Co.

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COMMISSION & CONTRACT WORK

UNITED WOOL DYEING & FINISHING COMPANY

DYERS and FINISHERS

KNITTED AND WOVEN WOOLEN AND WORSTED PIECE GOODS OF EVERY DESCRIPTION

SPECIALISTS ON
BROADCLOTH-PEACH BLOOM - BOLIVIAS
PILE FABRICS

CANAL STREET
PASSAIC, N.J. TEL. 3469

Silk, Cotton, Worsted, Artificial Silk, Linen, and Novelty Yarns, Twisting, Doubling, Reeling, Cops, Cones, Tubes, and Skeins, Winding in every form, single and multiple.

WINDING?

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Trenton, N. J., 4308

SCIENTIFIC TEXTILE CO.
Morrisville, Bucks Co., Pa.

WASTE
CUSTOM SERVICE
DUSTING
PICKING
CARDING
GARNETTING
ROLL CARDING
EXPERT ATTENTION

Samples and Prices on Request

BOLGER BROTHERS
1139-51 East Chelten Avenue
Germantown, Philadelphia, Pa.

AGENCIES AND COMMISSION ACCOUNTS SOLICITED

Will sell on commission or will buy your surplus yarns of all descriptions. Send samples and lowest price. Also Commission Twisting, Winding, Jack Spooling, Reeling, etc.

PARKIN YARN MILL,
5 Commerce St., Pawtucket, R. I.

TODAY

—A good time to make a list of the machines and equipment in your plant that are not in use, or those odd lots of yarns or supplies that you have no further use for.

Send the list to the Clearing House Department of Textile World. A small advertisement at a low cost will help you secure buyers. The rates are printed at the head of every Clearing House page.

TEXTILE WORLD
334 Fourth Ave., New York

Invent New Flax Process

Claim Preparation Time Reduced from Weeks to Hours

BOSTON.—A set of two machines for treating flax straw to remove the gum, bark and boom so that the fibers may be obtained in a relatively short time was demonstrated on Monday and Wednesday of this week at 156 Pearl St. by the B. & C Fiber Development Corp. of Boston. The inventors, T. G. Booth and Norman Craik, who were in attendance at the demonstrations, claim that they are able to reduce the time of preparation of flax fiber from five weeks to eight hours. Their process differs from others that have been developed for the same work in that they have arranged to break the straw before soaking, rather than afterward. This, they claim, allows more rapid penetration of the straw, and not only reduces the length of time required, but also provides a whiter fiber. The latter result is due to the elimination of a large part of the discoloration caused in natural retting by long contact with the stalk. Modification of the bleaching process, allowable because of this increased whiteness, reduces the loss in tensile strength.

The so-called "basting machine," which is Mr. Booth's invention, consists of a series of 32 pairs of small rollers, all revolving at about the same surface speed and decreasing in diameter at several stages from the beginning of the machine to the end. The first two pairs of rollers and the last pair are smooth and are intended to flatten and crush the straw passing through them, while the remainder are deeply fluted to break the straw. A large proportion of the shives, or broken pieces of stem, is removed by these rollers and falls to a compartment beneath.

The broken straw coming from the basting machine is placed in trays of wire screen, which are let down into the "degumming tank," designed by Mr. Craik. A neutral soap is the only chemical employed in this process. About 3 lbs. are added to the tank of water for each batch, which consists of 600 lbs. of straw; and the bath is heated each time by steam to a temperature not greater than 175 deg. F. About 3 hrs. are required for the soaking operation, after which the trays are lifted out of the vat by means of a hoist and the fiber is dried and hackled. It is claimed that the set of machines will handle two tons of straw per day, and that the cost of the entire process will be not over $15.00 per ton.

A Loan of Grégoire Velvets

The exhibition of textile fabrics in Gallery H 17 of the Metropolitan Museum of Art, New York, has recently received an interesting addition in an important group of Grégoire velvets lent by H. A. Elsberg.

Gaspard Grégoire, who was born at Aix in Provence, was one of the foremost artist-craftsmen working at Lyons during the Napoleonic period. The velvets of Grégoire were woven with a painted warp—the technique, which was extraordinarily complicated, enabling the weaver to produce each subject in quadruple.

The Elsberg loan includes the following subjects: Napoleon, after the portrait of Gérard; Louis XVIII in the style of Gérard; the Fourth Evening Hour of Raphael; a small medallion of a battle scene; and a decorative border in the style of Pernon.

Changes at Page and Gosnold

Resignations Offered to Facilitate New Plans

NEW BEDFORD, MASS.—Charles M. Holmes has tendered his resignation as treasurer of the Gosnold and Page Mills of this city, and Charles L. Harding has also resigned as chairman of the board of directors. This action was taken at a meeting of the board of directors held last Monday at the office of Harding, Tilton & Co. in Boston, when the firm of Harding, Tilton & Co. also offered to terminate their selling agreement as of Sept. 30. Harding, Tilton & Co. had for many years been the exclusive selling agency of the corporations.

Both resignations are to be effective on their acceptance and the appointment of their respective successors to office. The firm offered its facilities for the selling of goods direct in New York for the time being, without any compensation, the offer being accepted. Acting in accordance with the recommendations of the special committee appointed in August to investigate the selling policies and management of the two mills, the board of directors took this decisive action.

The committee appointed comprised E. Russell Richardson, Charles M. Holmes, Newell W. Tilton and J. Henry Herring. The resignations will necessitate some changes in the personnel of the board of directors, and until these changes have been made, there can be no appointment of successors to the positions that have been vacated. Upon the selection of a new treasurer, Mr. Holmes will be in a position to devote the whole of his attention to the Holmes Mfg. Co., of which corporation he is the treasurer.

Mr. Holmes received his textile training in this city, passing through the various departments of the Potomska Mill on his graduation from high school. He left New Bedford to become overseer at the Amoskeag Mills, Manchester, N. H., returning as superintendent at the Wamsutta Mills. He later left New Bedford to manage the B. B. Knight Mills, coming back to this city to build the first two Manomet Mills, where he was agent. He was made treasurer and agent at the Holmes when that mill was started in 1909, a position he still holds.

The TEXTILE CLEARING HOUSE

Position Wanted

Man with many years' practical experience in dyeing, bleaching, printing and finishing of textiles, a chemist and colorist and plant superintendent desires position as superintendent or assistant.

Address Adv. 578, Textile World, 334 Fourth Avenue, New York.

Young man, 26, at present employed as Assistant Dyer, desires to change. Philadelphia Textile School graduate. Approximately 4 years' experience on Woolens, Worsteds, Cotton and Plush goods. References. Interview. Salary second consideration. New England preferably.

Address Adv. 579, Textile World, 334 Fourth Avenue, New York

Cotton Yarn Salesman

of several years' experience on both Eastern and Southern yarns, carded and combed, desires to make new connection. New England territory preferred. References. Address Barrett, Box 1204, Providence, R. I.

Situations Wanted

Manufacturers who are in need of superintendents or overseers for any department of mill work may learn of suitable men upon application by mail or telephone to C. T. DONLEVY, care Textile World, 65 Franklin Street, Boston, Mass.

OVERSEER KNITTING OR KNITTING MACHINE REPAIRMAN. Position wanted by man 42 years of age, French, single. Worked on dress goods, bathing suitings and sweaters. Familiar with Crane, and Tompkins spring needle machines. Good recommendations.
O. B. 641, Textile World, Boston, Mass.

BOSS DYER OR CHEMIST. Position wanted by man 23 years of age, American, single. Worked on garments, felt, hosiery, cotton, wool, yarn, raw stock, and rayons. Familiar with Rodney Hunt, Franklin process, and American Laundry machines. Good recommendations.
O. B. 717, Textile World, Boston, Mass.

SECOND HAND WOOLEN CARDING. Position wanted by man 50 years of age, American, married. Worked on all kinds woolens, worsteds and hosiery. Familiar with D & F, Lombard, Worcester machines, and condensers. Good recommendations.
O. B. 777, Textile World, Boston, Mass.

OVERSEER DYEING IN WOOLEN MILL. Position wanted by man 50 years of age. English, married. Worked on raw stock, piece dyes, yarn, indigo, etc. Familiar with all kinds machinery. Good recommendations.
O. B. 788, Textile World, Boston, Mass.

OVERSEER WEAVING IN SILK MILL. Position wanted by man 30 years of age. American, married. Worked on crepe satins, crepe de chines, radiums, canton crepe, cotton back satines, pongees, etc. Familiar with C & K looms, dobby and gem head, Stafford looms, etc. Good recommendations.
O. B. 964, Textile World, Boston, Mass.

SUPERINTENDENT WORSTED YARN MILL. Position wanted by man 48 years of age. English, married. Thoroughly practical man in all departments on dress goods, mens wear, knitting yarns, heather and rayon mixes. Good recommendations.
O. B. 996, Textile World, Boston, Mass.

SUPERINTENDENT KNITTING MILL. Position wanted by man 43 years of age. American, married. Worked on all grades of knit goods. Familiar with all types underwear machines. Good recommendations.
O. B. 1185, Textile World, Boston, Mass.

DESIGNER ON WOOLENS OR WORSTEDS. Position wanted by man 26 years of age. American, single. Worked on worsteds, cotton worsteds, wool worsteds, wool cashmere, cotton woolens, overcoatings, etc. Good recommendations.
O. B. 1301, Textile World, Boston, Mass.

OVERSEER DYEING WOOLEN OR WORSTED MILL. Position wanted by man 40 years of age, American, married. Worked on all classes of woolen and worsted. Good recommendations.
O. B. 1308, Textile World, Boston, Mass.

OVERSEER WOOLEN SPINNING. Position wanted by man 27 years of age, American, married. Worked on woolens and some worsteds. Familiar with J & B mules. Good recommendations.
O. B. 1309, Textile World, Boston, Mass.

DESIGNER OR ASSISTANT DESIGNER. Position wanted by man 22 years of age, American, single. Worked on cotton, woolens and worsteds. Good recommendations.
O. B. 1310, Textile World, Boston, Mass.

SUPERINTENDENT OR ASST. SUPT. COTTON MILL OR OVERSEER CARDING. Position wanted by man 46 yrs. of age, American, married. Worked on coarse, medium and fine cotton yarn and cloth. Familiar with all makes cotton machinery. Good recommendations.
O. B. 1311, Textile World, Boston, Mass.

Obituary

Stephen D. Bennett

Stephen D. Bennett, superintendent and manager of the National Yarn & Processing Co., Rossville, Va., died in New York. Mr. Bennett served as superintendent of the Efird Mills at Albemarle for a number of years. He came to Albemarle from New Bedford, Mass. He is survived by his widow, one son, C. B. Bennett, an instructor at Clemson College, S. C., and one daughter.

William H. Brackett

William H. Brackett, overseer of the spooling room of the Gardiner Hall, Jr., Thread Co., at South Willington, Conn., and for 48 years connected with that company, died suddenly on the road leading to his home in that town Thursday of last week, aged 73 years. He had been active in public life, had served in the State Legislature, as selectman of the town and as town treasurer for many years.

W. T. Vereen

Funeral services for W. T. Vereen, president of the Moultrie (Ga.) Wholesale Grocery Co., son of W. C. Vereen, banker and cotton manufacturer of Moultrie, and brother of W. J. Vereen, former president of the American Cotton Manufacturers Association, were held at Moultrie from the First Presbyterian Church Sept. 26. He is survived by his widow.

Henry D. McConkey

Henry D. McConkey, for years, prominently identified with the glove manufacturing industry of Johnstown, N. Y., died last week after a brief illness. He was 73 years old. For a number of years he conducted a manufacturing establishment in North Perry St. but was forced to relinquish his duties some time ago.

Ira Luther Smith

Ira Luther Smith, 36 years of age, who left Reading, Pa., last January to take part in a new underwear mill opened in New Falls, Ala., by Solon D. Bauser, hosiery and underwear manufacturer, of Reading, Pa., died recently of a complication of ailments. He leaves a widow and four children. The burial was at Reading.

Melvin W. Snell

Melvin W. Snell, for many years prominently identified with the textile industry of St. Johnsville, N. Y., died at his home following a brief illness. He was 48 years old. For several years he had held the position as office manager of the Royal Gem Department of the Union Mills, Inc.

W. A. Rudisill

W. A. Rudisill, aged 72, prominent cotton manufacturer of Lincolnton, N. C. died at the Salisbury (N. C.) Hospital on Sept. 21.

William M. Stevenson

William M. Stevenson, aged 59, colorist at the Bigelow-Hartford Carpet Co., Clinton, Mass., died at his home in that city Sept. 8. He leaves a widow, a son, a daughter and two grandchildren.

The TEXTILE CLEARING HOUSE

Men Wanted

SALESMEN WANTED

We offer a very good opportunity to one or two salesmen who are well acquainted with the Textile Mills and Tanneries, to sell Dyestuffs, Finishes and Sulphonated Oils. Salary and Commission. State full particulars of your experience with application. Selling experience in the above lines is essential.

Address Adv. 480, Textile World, 334 Fourth Ave., New York.

Seamless Hosiery Assistant Superintendent; Also Hosiery Dyer Wanted
Want to strengthen our organization. Need services of a couple young men with several years of experience. Must have fair education, be absolutely honest and dependable and able to furnish references. Give particulars in first letter as to age, past experience, married or single, etc.
STRUTWEAR KNITTING COMPANY, Minneapolis, Minn.

Boss Dyer

Experienced in application of direct colors to cotton warps. State experience, age, salary expected and any other details.

Address Adv. 584, Textile World, 828 Drexel Bldg., Phila., Pa.

WANTED

Boss Carder to act as superintendent of a carding and spinning department for a small New England Woolen Mill. A man who can take financial interest preferred.

Address Adv. 585, Textile World, 334 Fourth Ave., New York.

EXPERIENCED FIXER on 42 gauge Reading Full Fashion hosiery machines.

Address Adv. 589, Textile World, 334 Fourth Ave., New York.

WANTED
OVERSEER SPINNER

By large Mill. 16 Platt Mules, having approximately 8,000 spindles—Woolen yarn running 4 to 25 cut. Ten-hour day, fifty-hour week schedule. Must be experienced, reliable and capable of handling men.

Address Adv. 591, Textile World, 334 Fourth Avenue, New York

Position Wanted

Dye Works Manager at present managing large works in Britain doing almost exclusively **Vat Colors** on piece goods yarns and artificial silk, wishes to enter first class works in U. S. A. in similar capacity. Advertiser is 43 years of age, has first class chemical training on the Continent and is considered an expert in the application and also manufacture of Vat colors. He has had exceptional experience in the designing and erecting of works and plant, is capable of handling large numbers of men and to take sole charge of a big concern. Firms requiring a real live wire and first class organizer please communicate in the first place with.

Address Adv. 580, Textile World, 334 Fourth Avenue, New York.

Superintendent or Assistant Superintendent
Man 35 years of age, married, who has had 17 years of experience manufacturing high grade Men's and Women's, children's and infants' underwear, the last few years have been working chiefly in Rayon and Silk. Wishes to connect with some reliable firm who is looking for a live man. Can furnish the best of references.
Address Adv. 594, Textile World, 334 Fourth Avenue, New York.

Men Wanted

Dyer — Wanted

A dyer competent to take charge of all dyeing operations in a progressive industry manufacturing a large variety of pile fabrics. The man who can qualify is probably between 35 and 45 years of age who has received a good education, preferably a college training, qualifying in Chemistry, who has had practical experience in dyeing for more than just a few years, who knows the theory and practice of skein dyeing, cotton, rayon, and organzine, and piece dyeing of pile fabrics, mohair and mohair mixtures, who can handle men, obtaining production, and has enough vision to be as good an executive as he is a dyer. For the man with these qualifications there will be ample remuneration and opportunity for development. Replies must be in detail and will be held in strict confidence.

Address Adv. 572, Textile World, 334 Fourth Ave., New York.

OVERSEER WANTED

A splendid opening for a competent and experienced man on FANCY TWIST YARNS for Suitings, Dress Goods, etc.

Address Adv. 595, Textile World, 334 Fourth Ave., New York.

SALESMAN

Experienced, energetic, forceful salesman for large Specialty house, to sell Boil-Off Soaps, Finishes, Sizes, Degumming Agents, Sulphonated Oils, etc. One having experience preferred. Good opportunity for the right man. State territory, salary and other particulars. All matters held confidential.

Address Adv. 590, Textile World, 334 Fourth Ave., New York.

Position Wanted

POSITION WANTED

DESIGNER

Men's or Women's wear.
Woolen or Worsted.
Valuable experience.

Address Adv. 570, Textile World, 334 Fourth Avenue, New York

Wanted

Somewhere in the West or Southwest is a firm looking for a man to fill the position I want. I have eleven years' experience in fixing plain Banner-Split Foot, Banner-Steady Dial and Hepworth Loopers. Some experience on Seamers and other textile machines. Five years of the eleven as Foreman Fixer and Supervisor of Knitting in a large Plant in the East. Can furnish A 1 reference.

Address Adv. 583, Textile World, 334 Fourth Avenue, New York.

TEXTILE CLEARING HOUSE

	1 Inch	2 Inches
1 time	$3.50	$7.00
2 times	7.00	13.20
3 times	10.50	19.20
4 times	13.20	24.80

	3 Inches	4 Inches
1 time	$10.50	$13.20
2 times	19.20	24.80
3 times	27.90	36.00
4 times	36.00	48.00

THE BRAGDON, LORD & NAGLE CO., INC.

Harold J. Gross, James H. Hurley, and E. Tudor Gross, *Auctioneers*

MASTER'S SALE
by
PUBLIC AUCTION

By order of Edward A. Stockwell, Special Master

Tuesday, October 19th, 1926
Wednesday, October 20th, 1926
Thursday, October 21st, 1926

Beginning each day at 10 o'clock, a. m., on the premises

The Entire Property of

S. H. Greene & Sons Corporation
(CLYDE BLEACHERY AND PRINT WORKS)

Main and Clyde Streets, and the North Branch of Pawtuxet River, and Pawtuxet Valley Branch of N. Y., N. H. & H. R. R.

CLYDE, WEST WARWICK, RHODE ISLAND

78 — LOTS OF REAL ESTATE — 78

Including: the BLEACHERY and PRINT WORKS, with about 29 acres of land, bordering about one-half mile on both sides of the Pawtuxet River, the WATER PRIVILEGE of 72,000,000 gallons of water per week in perpetuity assured by the City of Providence, Dam, Gatehouse, and Trench, SPUR TRACK; Large Storehouse, with PRIVATE SPUR TRACK; Five Tenement Houses; Tract of Land with Railroad Facilities; Tract of Land bordering on River; 53 House Lots on Clyde, Wightman, and Simon Streets; 3 Business Sites on East Main Street; 10 Business Sites on Main Street; Homestead and Lot, Chapel and Lot, and Clyde Store, Barn, and Lot, on Main Street; all near Clyde Square.

1000 — LOTS OF MACHINERY, EQUIPMENT and SUPPLIES — 1000

COMPLETE EQUIPMENT FOR BLEACHING, DYEING, PRINTING AND FINISHING COTTON PIECE GOODS

Including: Printing Machines; 3450 Engraved Copper Printing Rolls, of standard bore; Engraving Machines; Horizontal and Vertical Sets of Drying Cans; Tentering Frames; Calenders; Mangles; Soapers; Washing Machines; Dyeing Machinery; Ageing Machines; Folding Machines; Winding and Rolling Machines; Kiers; Kettles; Tanks; Stationary and Portable Sewing Machines; Stretching Machines; Moistening Machines; Engines; Pumps; Motors; Generators; Shafting; Pulleys; Trucks; Machine Tools; Horse and Wagons; Office Equipment, LARGE ASSORTMENT OF DYE STUFFS AND CHEMICALS.

The Real Estate will all be sold on Tuesday, October 19th, 1926, beginning with the Manufacturing Realty, at 10 o'clock, a. m., on the premises.

The Machinery and Equipment will be sold on Wednesday, October 20th, 1926, and Thursday, October 21st, 1926, beginning each day at 10 o'clock, a. m., on the premises.

To be sold separately, in lots to suit purchasers. The Machinery, Equipment and Supplies will be sold to the highest bidders. The Real Estate will be sold subject to the approval of the Court.

Descriptive catalogue may be had on request

THE BRAGDON, LORD & NAGLE CO., INC.
334 Fourth Avenue New York City

G. L. & H. J. GROSS
Real Estate and Insurance

170 Westminster St. Providence, R. I.

Mills Wanted, For Sale or Lease

FOR SALE

Land and brick buildings, about 40,000 square feet floor space, located in Allentown, Pennsylvania. Floors suitable for carrying textile or medium weight machinery. Good labor market, railroad siding. Prices and terms reasonable. These buildings are suitable for textile or silk mills, metal working plants, or other like manufacturing. Brokers to secure protection must furnish customer introductory letter and file duplicate with us.

Address Adv. 597, Textile World,
334 Fourth Ave., New York.

Paper Box Plant For Sale

1—Hobbs single scorer 45".
1—Hobbs single corner cutter.
1—K & B stayer 4½" Hobbs.
1—Slitter.
2—Metcalf 9" power strippers—variable speed.
1—Lynn topper 12".
1—Hill mixing tank.
1—1/6 H.P. Motor, 110 volt D.C. back-geared 7/1 reduction.
2—¼ H.P. 110 volt D.C. Motors Bodini.
3—⅜ H.P. 110 volt, D.C. Motors Roth Bros.
1—¾ H.P. 110 volt, D.C. Motor Roth Bros.
1—Mather electric dynamo—66 D.C.

Write or Wire
THE DUNHAM MILLS, INC.
18 Asylum St., Hartford, Conn.

For Sale

16 acres of land, 150,000 square feet manufacturing floor space, buildings sprinklered, suitable for textile manufacturing plant. Address,

FOWLER LUMBER & PLYWOOD COMPANY
P. O. Box 194, Macon, Georgia.

For Sale

Plant suitable for Cotton or Hosiery mill. Located at Livingston, Ala. Two-story brick building, 50 ft. wide by 250 ft. long. 10 acres of ground. Nine tenant houses. Two railroad sidings. Electric current from Alabama Power Company available. Can be bought at great bargain. Address,

A. M. McGEHEE,
Avon Park, Fla.

FOR SALE

Building 3½ story, 44 x 132—well equipped for manufacturing garments—good location—No union trouble—Price reasonable.
Address Adv. 569, Textile World,
334 Fourth Avenue, New York.

MILL FOR SALE

Get into business. Buy this Mill. Close to Market. 3 railroads. Mill adapted to manufacture suitings, overcoatings, blankets. 10 looms, 2 set cards, 2 mules, complete finishing equipment. Skilled labor here.

L. C. HARVEY, Sec.
Oconto Chamber of Commerce,
Oconto, Wis.

Men Wanted

A man thoroughly experienced in merchandising (buying or selling) children's and infants' stockings and socks of all grades. Some knowledge of manufacturing desirable.

Address Adv. 587, Textile World,
334 Fourth Ave., New York.

Men Wanted

Wanted

Manufacturing and analytical chemist who has experience in Sulphonated Oils, as well as Tallow, Sizing and Softeners for textiles and leather. State full particulars.

Address Adv. 598, Textile World,
334 Fourth Ave., New York.